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THE ECONOMIC WAY OF THINKING*

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The proposition to which I should like to draw attention is not novel. But in these days of physical planning and social priorities, it may not be amiss to recall something ancient, if it is something relevant. And that is that economic analysis rests fundamentally upon individual choice; and where the individual cannot choose, economics does not exist. Economics is concerned with the application of scarce resources to unlimited wants. Costs, utility or indifference calculations, saving and consuming, investing and hoarding, altering productive proportions, introducing new combinations—in all the manifold aspects of the economic problem, the key phenomenon is choice.

Choices in these matters can be made collectively. But there is certainly a narrower and very significant sense in which choice is only individual; and it is this kind of choice which economics, in contrast to ethics and politics, takes for its subject matter. A moral law, enforced by public censure or approval, limits the choice of individuals. A political decision or law, even in a democracy except in the rare case of unanimity, also limits individual choice. But an economic generalization describes individual choice and its results. This does not mean that there should be neither moral nor political law; it merely asserts the contrast between moral and political on the one hand and economic on the other.

To the determinist in general or in social philosophy, a contrast based on free will would, of course, be inadmissible. But I am content to speak in commonsense terms. There is significance—and indeed very deep significance—in the statement that the moral injunction to speak the truth limits the freedom of the individual to say whatever he chooses, even though he voluntarily accepts the principle as categoric. In political matters a tax law, though resting upon free political choice in a parlia-

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mentary state, abridges the freedom of the individual to spend his money as he chooses. Economic laws do not abridge but rather describe the choice of individuals and the outgrowth of these choices in market phenomena.

This same contrast appears when we shift our viewpoint from a generic to a quantitative basis. Even when ethical or political law indicates a direction of choice which the individual would elect if left to his own free choice, it cannot in the nature of the case result in the same quantitative solution, except quite by accident. Thus a moral code may impose temperance in the consumption of alcoholic drinks; but the individual's acceptance of the principle does not give any precise quantitative solution. A public spirited person may vote for a social security program, recognize that it must be supported by taxation, and yet try to avoid paying a larger sum in personal income tax than necessary. Generally speaking, the expression of choice through the ballot, whether at the popular or parliamentary level, becomes less and less comfortable to the free choice of each individual, the larger the group to which the measure is applied. Political decisions, by their very nature, involve choices made for groups, and are thus at best approximations of what and how much the individuals would choose. Economic decisions are, on the other hand, marginal—that is, they conform to "the little more, the little less."

"The little more, the little less" lies at the heart of economic thinking—in the analysis of income allocation, of costs of production, of outlays on advertising and other selling devices, of spending vs. saving, of investing vs. hoarding money, and the like. But the "little more and the little less" has, practically speaking, to be a matter of individual decision, since decisions on a moral or political basis almost certainly involve, by comparison to individual budgets, very gross magnitudes. Economics is thus individualistic in a profound sense.

Most wants, beyond some very primitive physical urges, are "social wants" in the sense of their being imbued with the tastes, morals, and customs of the surrounding society. But the subject of these wants is still the individual. The same is true of "collective wants," that is, wants which either can (practically) be satisfied only by processes which result in the production of the good or service for a number of people, or which require a number of participants in the enjoyment of the product. The subject of the want is still the individual. Economic guidance of production for wants of these characters still requires a free-market expression of preferences.¹

¹ Conclusions similar to these are expressed by Theo Suranyi-Unger in an article on "Individual and Collectives Wants," *Jour. Pol. Econ.*, Vol. LVI (Feb., 1948), pp. 1-22, especially pp. 12, 15.

Is this just a peculiar form of words, which I propose? Could not most of the decisions which I have labelled political and ethical, as well as those more narrow economic choices, be embraced under a broader and more flexible concept of things economic? Such an alternative set of definitions would, indeed, be possible. But it would still be necessary to give a distinctive designation to the study of free individual choice in matters of production, a freedom which, as I have emphasized, differs qualitatively and quantitatively from moral and political choices. Thus the competing terminology would come out with the same substantive distinctions as my own, which has the decided advantage of conforming to common understanding.

In describing economics as concerned with the processes and results of individual free choice on the market, I differ significantly from the description given by Lionel Robbins that economics deals with the application of scarce resources to *given* ends.² Robbins' description would, for example, include the analysis of productive effort to serve the ends given arbitrarily—and let us say for present purposes, whimsically and sadistically—by an absolute dictator. But this is not economics. What makes resources "scarce"? And what determines their "economic" application, if it is not the attitudes of individuals toward supplying their services, and their own evaluations of products aside from and independently of the dictates of authority, whether that authority be "duly constituted" or not. Alternatively, one may express the same idea by saying that Robbins' definition errs in accepting any and all "given ends"; one end must be stipulated by economics itself, and that is the freedom of the individual to make the best of his situation as a producer or consumer, so far as this does not entail greater loss of freedom upon other individuals.

The individualistic predilection of economics does not, however, commit economists to a *laissez-faire*, Manchestrian, or "reactionary" position. Some decisions concerning economic problems have to be political, for no one except an anarchist could deny that perfect freedom of individual choice occasionally leads to results unacceptable to the community. Economists may thus range from extensive interventionists to "hard boiled" liberals, according as they think these occasions to be numerous or few. There are indeed strong grounds for supposing that the occasions might be quite numerous merely for one reason alone—that free individual choice is quite as likely to take the direction of an effort to monopolize as to compete.

An individual or firm possessed of monopoly power does not always press this advantage to the maximum, indeed frequently does not press

² Lionel Robbins: *Essay on the Nature and Significance of Economic Science*, 2nd ed. (New York, 1935).

it very far. But if the monopolist "acts like a monopolist" and his monopoly pertains to an important commodity or service, there usually ensues a political decision which suppresses this individual's free choice. It is significant for the validity of my thesis, however, that this decision characteristically takes the form of attempting to supplant the monopoly by competition, or of attempting to regulate the monopoly and to simulate competitive results. In either event the aim is to restore results similar to those which would appear on the market from the free choice of individuals, except for the offending monopolist.

Economics has successfully described the outcome of competitive market situations where individual choice is free. Its success in analyzing various hues of monopoly varies in about an inverse proportion as monopoly elements grow and free choice dwindles. Thus simple monopoly, with freedom as to price or amount purchased on the demand side, yields a definite solution. Two-sided monopoly with each monopolist having the power to dictate price but not quantity yields a determinate solution of quantity but the division of the price is indeterminate. Between these extremes and competition are intermediate cases where not one but several producers dominate the market; and for these cases, theoretical economics is able to state only zones or areas of probable solutions on various suppositions as to the freedom of choice of the individual firms. Efforts to press the frontier of economic analysis farther into this territory are, of course, welcome and necessary. But as we pass gradually from situations in which economic activity is guided by individual free choice toward more (uncontrolled) monopoly and toward more political choice, the substance of economics comes to be more and more prescinded and more tentative. At the limit, where all economic activity is controlled by the state and all decisions are political, economics expires and the economist is put out to grass. He no longer has any criteria of income allocation, costs, money holdings, savings, foreign trade, etc., which he could use to test the arbitrary decisions of the authority. If asked to appraise the efficiency of the controlled economy, he would have to ask for the restoration of free choice in one or many fields, in order to permit him to see how matters actually stand. Thus there undoubtedly is such a thing as a government economist, but only by virtue of the fact that enough decisions are made outside the government to permit government decisions to be tested by economic criteria.

The thesis which I maintain can now be briefly restated. Economics studies the application of limited resources to wants which are less limited. The limitation of resources reveals itself in costs; and at bottom all costs excepting natural resources are human, that is, they are costs to individual beings. At bottom, also, unsatisfied wants are the wants of

individual beings. Only to the degree that these costs and utilities to individuals can express themselves in the market can economic analysis exist. To the degree that political or ethical norms rule the market, to the same degree does the possibility of applying economic criteria recede or vanish.

II

I propose to test the validity of this proposition by reference to four concepts of maximum or optimum solutions to be found in current economics. To the economic way of thinking, "optimum" implies or should imply the best application of limited resources to our less limited, *i.e.*, practically unlimited, wants. Of course this central problem takes many aspects or dimensions; and consequently economic analysis is not constrained to state just one optimum. The four concepts chosen for purposes of the argument illustrate different dimensions of the economic problem; but they also illustrate the central theorem that where politics and ethics come in by the window, economics goes out by the door.

Let us begin with one of the oldest—and currently one of the most maligned—of these optima, the so-called "doctrine of maximum satisfaction." In non-technical language this principle states that, if left to their free choices, both consumers and producers will so allocate expenditure that the return in any one line of outlay, either in direct satisfaction from the good or in expected product, will not be less than could be obtained from any other line of expenditure. Thus total satisfaction is a maximum, being a maximum for each individual. All economists state this principle with certain qualifications, and some economists regard the qualifications to be so extensive as to leave nothing of the original proposition. Those who would go so far would, I believe, be forced to conclude also that the aggregate of individuals accomplishes nothing in the effort toward a rational disposition of their limited resources toward satisfying wants, *i.e.*, we are unable to economize, and economics is nothing.

But this is a vast overstatement. Monopoly qualifies the principle, or more accurately limits its inclusiveness, for free choice is stipulated within the principle itself and monopoly abridges free exchange. But we are very far indeed from universal monopoly. Inequality of wealth and income also qualifies the principle but in a much less extensive fashion than commonly supposed. For to the degree that inequality is functional, that is, to the degree to which it is necessary to pay one man more than another to evoke his services, the national income or aggregate of satisfactions to be divided out is increased over what it would be with equal incomes. Unearned income from inherited wealth or from illegal or sharp practices thus qualifies the maximizing of product and satisfactions. Anyone may make his own guess as to how

large a fraction of personal income in the United States, at the present level of \$211 billions, is unearned. The facts that 82% of this total is embraced under wages, salaries and proprietorship incomes, and that certainly not all the remainder (in pure property income) can be regarded as unearned, may afford a cue to the answer. Finally, the principle has to be qualified for consumer caprice, habit, ignorance, and other impairments of rational behavior. Let me, however, recall the familiar lines of Wordsworth:

The world is too much with us; late and soon,
Getting and spending, we lay waste our powers.

In other words, we are typically far too much preoccupied with realizing the principle of maximum satisfaction; and it would indeed be surprising if we did not in large measure accomplish our intent.

In fine, then, maximum satisfaction encounters the barriers of consumer ignorance and irrationality, unearned income, and monopoly. The materialism of our present age with its remorseless urge toward higher standards of physical well-being and comfort does not seem to connote either caprice or inertia on the part of consumers. Unearned income seems to be ubiquitous; but it is a familiar story that the largest part of the national income accrues to the poor and to the moderately well-to-do, and not all income accruing even to the rich is unearned. Finally, monopoly and monopoly factors permeate nearly all production, but these elements have a visibility much more marked than the humdrum homogeneity of competition. I offer no apology for the wastes and abuses of our present economic society. But the ardor with which the American public threw off the constraints imposed by wartime price controls, rationing, and allocations would seem to indicate that consumer and producer free choice means something valuable. Consequently the principle of maximum satisfaction—for all its existing lets and hindrances—still embodies a truth worth the telling.

The concepts of economic optimum which follow are inferior to maximum satisfaction, if we employ as a criterion the effectiveness with which a society applies its limited resources to its wants; and no alternative economic criterion presents itself. In the "second best" position I would present the idea of "appropriate fluctuations of output," in the words of that most eminent English economist, D. H. Robertson.³ Underlying this idea is the conviction, common to nearly all economists, that the alternation of good and bad times is intimately associated with waves of technical innovation and the episodic stimulation of new investment. The process of purely scientific discovery probably goes on

³ D. H. Robertson, *Banking Policy and the Price Level*, 3rd impression, revised (London, 1932), Chap. II.

at a fairly uniform rate; but the effective application of pure science to practical and marketable products and the active creation and exploiting of new markets in a private enterprise economy, as Schumpeter has shown, awaits the discerning business venturer. Thereafter, the perfecters and imitators crowd in, this particular market is gradually pressed to the replacement demand stage, and the strong stimulus to new investment ebbs away.

In a best of all possible worlds it might be possible to achieve complete stability of production and a maximum rate of technical progress at the same time. But if we take into account business optimism engendered by the advent of some notable technological innovation such as, for example, the automobile, and the spread of this stimulus to bankers, family budget-makers, security traders, builders, exporters and importers, and even to government spending authorities, we would not be surprised to find the expansion running off into overly-full employment, inflation, bottlenecks, and wrong estimates, resulting in shortages in some sectors and overproduction elsewhere. So powerful are these disequilibrating forces that to control them completely might involve an intolerable degree of regimentation and might even stifle the impulses toward economic progress. Consequently, we will probably strike a compromise between continuous full employment and the most rapid rate of progress by accepting some fluctuations, while striving to keep them from developing into feverish speculative booms, followed by disastrous and protracted periods of unemployment.

The concept of appropriate fluctuations may be regarded from the angle of individual free choice. The history of business fluctuations demonstrates that giving completely free rein to private decisions to spend and invest will result in an intolerable degree of instability. Marxians and contemporary communists confidently believe that capitalism will one day be swept away in a catastrophic depression: the only cure of instability is the totalitarian state. But this has not been the diagnosis and prognosis of economics. Instability in the behavior of general aggregates such as the price level, spending, investment, and employment can be governed by similarly general measures—monetary policy, fiscal policy, wage policy, and the like. Keynesian and traditional economists alike reject the necessity of the piecemeal regulation of business, industries, and occupations. Free choice is indeed abridged by fiscal, monetary, and wage policy, but in impersonal and nondiscriminatory ways. Thus in a quite understandable sense—since unemployment and stagnant markets can scarcely be regarded as things which anyone would freely elect—the policies designed to reduce fluctuations to a tolerable or “appropriate” amplitude are also policies maximizing the field of free choice over the long run.

The two optima thus far reviewed are primarily economic in content: they represent situations without particular moral or political flavor which, in significant senses, result mainly from individual choice. In these cases the interference of the state has for its purpose the widening or extending of the field of individual choice, and not "ulterior" ends. Alternatively, it might be said that with respect to these two optima the political choices have for their aim the improved operation of individual economic choice. These characteristics fade away progressively as we proceed to two further concepts of optimum.

I refer first to the "optimum propensity to save," a magnitude implicit in the Keynesian general equilibrium theory, first made explicit by Oscar Lange.⁴ The idea of an optimum amount of saving is a part of the theory which attributes cyclical depression or longer-run stagnation to over-saving. Optimum saving is that amount which is compatible with full employment without inflation: more saving would spell a relapse from full employment, and less saving would spell inflation.⁵

From the interested angle of the present argument, the peculiarity of this optimum is that it runs directly counter to individual free choice. I do not make an appeal to some mysterious "natural law" or invisible hand; I merely assert that with human beings as they are, some of them spendthrift and some of them frugal, Western civilization generally reveals—aside from wars and other disasters—a tendency toward net accumulation. With the very rich, it may appear simply as a residuum after all consumption demands are satisfied. With some persons, again more frequently found amongst the rich or quite well-to-do, it may arise from the desire to grow wealthy or more wealthy for purposes of display, controlling other people's lives, or playing the game with higher stakes. But again, as in an earlier context, we encounter the fact that not only is most of the national income received by the moderately and the less well-to-do, but also that these income classes account for the largest part of savings. With them the motives thus far mentioned are exceptional and the one overwhelmingly important purpose is provision for the future.

Now an economic optimum which runs in terms of limiting this activity is indeed a paradoxical kind of optimum. Providing security against the rainy day and old age from the fruits of one's own productive activity may be an old-fashioned virtue, but it nevertheless provides substantial net social saving. This does not imply opposition to

⁴ Oscar Lange, "The Rate of Interest and the Optimum Propensity to Consume," *Economica* (Feb., 1938), pp. 12-32.

⁵ Actually, Lange's argument results in optimum *investment* and not optimum *saving*. But for the present analysis, I accept the author's intended position and the usual interpretation of his argument.

"social security" measures; but these measures should supplement and not supplant individual self-reliance. Amongst the several major variables which combine to produce downturns in economic activity or to protract depression, we can surely select more promising channels of public policy than influencing saving. In the first place, even the proponents of the over-saving thesis regard the growth of capital equipment as an earmark of economic progress; and hence consistency would demand primary emphasis upon inducing private investment sufficient to absorb savings, or supplementing this with public investment if need be—but in no event limiting saving. Secondly, saving rests upon ingrained habit or long-standing business mores and cannot readily be adjusted to short-term variations. But thirdly, when alternatives exist which do not abridge individual choice, and when their effectiveness is not less, they are clearly preferable.

Monetary and fiscal policies to stabilize economic activity are actually more effective because they operate quickly; and they do not abridge individual choice in the direct and objectionable fashion of policies to limit saving. Monetary policy consists directly of influencing the quantity of money and hence indirectly the rate of spending. Fiscal policy consists directly of influencing the rate of spending through the powerful government sector, and indirectly the quantity of money. Individual economic choice does not, except in a minor way and need not at all, influence the quantity of money; and individual economic choice does not determine government revenue and expenditure. Hence, in policies to achieve economic stability through Federal Reserve and Treasury operations, we are not significantly abridging the choices which the economic agents—individuals, businesses, state and local governments—regard as matters for their own disposition. Economic activity under private enterprise in a progressive economy is not self-stabilizing and it requires political decisions to bring about an even evolution. But amongst eligible alternatives there is no apology for making the political decision gratuitously abridge individual free choice. The "optimum propensity to save" does precisely this.

The fourth optimum to be considered is the notion of an "optimum rate of (foreign) exchange," first promulgated, so far as I know, by Mrs. Robinson.⁶ The idea is advanced rather incidentally and I do not propose to give it more than illustrative significance. Furthermore, this rate, defined as the one which—wage rates and other underlying factors being given—causes the favorable balance of trade to be a maximum, is explicitly said "by no means necessarily [to be] the most desirable rate from every point of view." Thus it may involve lower real income per

⁶ Joan Robinson, *Essays in the Theory of Employment*, 1st ed. (New York and London, 1937), pp. 198-201; 2nd ed. (Oxford, 1947), pp. 146-49.

unit of output than a somewhat higher rate of exchange. But there still remains the implication that, in some significant sense, a maximum favorable balance of trade and its accompanying exchange rate are optimal. What is this sense?

There are indeed many possibilities, but the one most characteristic of formal Keynesian theory would involve the multiplier effect from the stimulus to effective domestic demand proceeding from a favorable balance of trade. If this correctly interprets the concept, as I cannot unfortunately be sure, an optimum rate of exchange signifies—conformably to this system of thought—the maximum gain in domestic employment to be had at the expense of employment in other countries. In another essay Mrs. Robinson eloquently describes this as a "beggar-my-neighbor" policy.⁷ Thus the optimum includes only the citizens of the favored country and reduces the field of free choice and the maximizing of want satisfaction in other countries. If such an exchange rate is perpetuated by authoritarian controls, the policy is clearly a political choice at the expense of free individual choice for the foreigners. There can be little doubt—whatever the intent of the author of this theoretical concept—that substantially this course has been actively advocated by Balogh, Schumacher, and kindred spirits.⁸

III

I have maintained the thesis that the central economic problem is the application of scarce means to unlimited wants; that scarcity resolves itself principally into cost to individuals and the uncovered demand resolves itself ultimately into the unsatisfied wants of individuals; and finally, that the basic economic process is thus a weighing of costs to individuals and of utilities or satisfactions to individuals. These propositions do not, on the one hand, give results which are merely semantic or definitional, because they are set together of a straight-forward logical sequence. On the other hand, the propositions merely distinguish economic choices from those arrived at on ethical, social, or political grounds, without prejudice to any of these.

What useful inferences, then, can possibly be drawn from such innocuous analysis?—The review of economic or quasi-economic maxima illustrates one point with what I believe to be sufficient clarity: the ease with which it is possible to pass by small gradations from economic maxima reflecting the free choice of individuals in market decisions, to maxima more or less heavily imbued with political or ethical judg-

⁷ *Op. cit.*, 1st ed., pp. 210-28; 2nd ed., pp. 156-70.

⁸ Cf. Thomas Balogh, "A Case for Export Subsidies," *The Banker* (August, 1943), pp. 71-75; E. F. Schumacher, "Export Policy and Full Employment," Fabian Research Series, No. 77 (London, 1943).

ments, without serving notice upon the intellectual consumer of these maxima. Because the concepts of maximum or optimum in the economic literature of the "scientific period" since Adam Smith dealt with free market decisions, and because economists and the public have become thoroughly habituated to this connotation, the danger is great that the newer concepts will be accepted with an unawareness of their ulterior meanings. Thus Sir William Beveridge's "social priorities" really involve political and authoritarian ethical decisions, though the reader is not warned of this fact and the "free society" part of the title of his book⁹ would rather strongly suggest free individual choice.

The central emphasis of my reasoning, however, has not been put upon this more or less ideological pitfall but upon real events. The body of economic analysis has been built up upon the ultimate facts of scarcity, cost, and the satisfaction of human wants, and cost and utility do not reveal themselves except in the choices of individual persons. The larger the group for whom the choice is made vicariously by moral or political authority, the greater is the probable divergence of these vicarious choices from what the people would themselves have elected, which generally goes under the caption of "marginalism" in theoretical terms.

No society can be operated merely on the basis of free individual choice in the markets, for there are conspicuous cases, such as monopoly, cyclical variations, ignorance, perverted tastes, fraud, incapacity to produce enough for a living, and many more, requiring political intervention. As populations increase and techniques become more involved, necessary controls seem to become more numerous. And yet this does not and cannot deny that man, and indeed individual man, remains the measure of all things: wants are personal and effort is personal. Is it not profoundly significant that the authors of the outstanding and pioneering work *On the Economic Theory of Socialism*, the one, Professor F. M. Taylor, a staunch liberal, and the other Oscar Lange, a socialist, have based the entire structure upon consumer free choice of expenditure and producer free choice of occupation? Lange's socialism consisted essentially of state ownership of productive property and of the enforcement of freedom of consumer and producer choice. With regard specifically to any "preference scale imposed by bureaucrats," let it be noted that it was Lange who wrote: "Such a system would scarcely be tolerated by any civilized people."¹⁰ I would myself prefer to say more cautiously that if the preference scale is "imposed by bureaucrats," economics has long since been silenced. The only type of socialism

⁹ Sir William Beveridge, *Full Employment in a Free Society* (New York, 1945).

¹⁰ Oscar Lange and Fred M. Taylor, *On the Economic Theory of Socialism* (Minneapolis, 1938), p. 95.

compatible with the economic way of thinking is a socialism based preponderately upon individual free choice—of consumption, of occupation, of other matters expressible upon markets.¹¹

These reflections apply to what is called "economic planning." In the first place, "planning" falls victim to the same ambiguity which put in its appearance with the concepts of optimum. Some planning is, and some is not, compatible with the maximizing of the field of individual free choice. Some planning signifies the formation of institutions such as the International Monetary Fund, which was designed—at least in some notable respects—to restore free-market processes. Planning in another sense, such as the agricultural price-parity program, is well calculated to undermine market processes and make the economy subject solely to political forces. All too often planning of this variety is defended as "welfare economics," although it negates economics and ignores the loss of welfare imposed upon the economy as a whole by the gain of a special segment. It is impossible to oppose "planning" if it simply means forethought, consistency, and rational provision for contingencies in public policy; but very often the term simply covers the growth of political decision at the expense of the economic calculus.

A totalitarian state, or a society dominated by power-blocs of labor, agriculture, and industry cannot give expression to the economic calculus. Economics is necessarily a matter fundamentally of individual choice and it is thus necessarily also libertarian and individualistic. Authoritarian societies will gladly bid farewell to the economic way of thinking. But not only will personal liberty have taken leave, but also the processes by which the individual secures from his limited resources the best satisfaction of his individual wants. It would not be the century of the common man.

¹¹ Bequest of property as the basis for someone's else living in idleness would indeed disappear; but this is not a serious limitation of free choice, since dead men cannot choose.

TRADE UNIONISM, FULL EMPLOYMENT AND INFLATION

By WALTER A. MORTON*

As a result of the postwar experience the belief has grown that one of the strongest impediments to the use of monetary and fiscal powers for the maintenance of a high national income is the increased strength of trade unions and their influence over the wage level. It is feared that trade union policy will compel a continued annual increase in wage rates exceeding the rise in physical productivity, thus making price inflation a necessary concomitant of full employment and forcing the unpalatable alternative of underemployment or inflation. We shall, therefore, inquire into the influence of unionism in the past and what it is likely to be in the future.

I

Although not always clearly formulated, the alleged inflationary influence of unionism can be reduced to three propositions.

1. That trade unions in the postwar period have pursued policies that made the rise in prices much greater than it would have been with individual bargaining and competition in the labor market, and that this policy was made possible by the fact that unionism is a form of monopoly power which is inherently inflationary.¹ This view implicitly assumes that except for unionism, prices would have risen much less and that the wage-price spiral would not have existed under the assumed conditions of perfect competition in the labor market. Wage policies are looked upon as the instigator and principal cause rather than the instrument of the wage-price spiral.

2. That if unions had pursued a policy of money wage stabilization instead of trying to keep wages abreast of prices, the degree of inflation would have been less. This view does not contrast actual policies with the assumed results of perfect competition but rather with a sacrificial wage policy in which the leadership deliberately sacrificed possible wage gains in order to keep prices down. It assumes such policies were possible for the leadership and would have been more beneficial to the community.

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¹ See "Postwar Political Economy: The President's Reports," M. Bronfenbrenner, *Jour. Pol. Econ.*, Vol. LV, No. 5 (Oct., 1948), pp. 382-85.

3. That the wage-price spiral could have been prevented if unions had exerted their political influence to retain wage and price control in 1946 instead of asking for the discard of the Little Steel Formula and the determination of wages by voluntary collective action. This is a criticism of labor politics and beyond our purview here where we are dealing with labor policy in a free market.

Those who believe that unionism is inherently inflationary propose that we prepare to suffer its consequences or destroy the unions. Some suggest a drastic change in the allocation of economic power by restoration of atomistic competition and liberalism of the purported nineteenth-century type which they fancy will make our system function more effectively.² They would apply the traditional American anti-monopoly philosophy to trade unions which have heretofore been exempt from it. A second group assumes that no substantial change will occur in our institutions, but they believe that unions might pursue better policies, putting their faith in reason, exhortation, intimidation and economic coercion mixed in uncertain proportions. A third group believing that unionism is here to stay but that the self-interest of unions is and will remain incompatible with stability of prices and full employment, advocate direct governmental control over the general level of wages through national wage policy enforced by law or custom as a substitute for the determination of wage levels by voluntary collective bargaining. We shall examine these proposals after we have considered the causes of the recent price spiral and the part played therein by organized labor.

II

The recent inflation is unique because it has resulted predominantly from an increase in the velocity of money whereas in previous inflations prices, wages, and the quantity of money moved upward together. We might also characterize it as a delayed effect of the wartime increase in the money supply which had been temporarily dammed up by price control. The process of inflation was the wage-price, expenditure-income spiral. The basic causes were the quantity of money and a persistent demand for goods. In this view the spiral is not an independent, alternative explanation of price changes which can be substituted for the monetary theory; it is merely a description of inflationary processes which fits into the framework of traditional theory. By so treating it we can integrate the mechanism of inflation with the quantity theory of money by means of income-expenditure analysis. The recent treatment of the spiral as an independent causal explanation is, moreover, misleading for policy purposes because it mistakes instrumentality by which

² Many follow the late Henry Simons in his *Economic Policy for a Free Society* (Chicago, 1948).

inflation occurs for its causes and puts emphasis upon direct legal regulation of wages and prices rather than on monetary and fiscal control of the quantity and velocity of money. There is, however, a simple explanation for this elevation of a process into a first principle. Because we had given up hope of controlling the dammed up inflation after the war by reducing the quantity of money or lowering its velocity by drastic taxation, we tried to stop the spiral by exhorting and threatening labor and business. As a consequence, the erroneous belief grew that the level of prices is determined by the spiral and primary attention was directed to the wage bargain and to profits rather than to the quantity of money.^{2a}

^{2a}This emphasis upon the process of inflation to the neglect of its basic cause in an excessive money supply appears to be a direct consequent of recent preoccupation with the income-expenditure theory of output and prices. The simple quantity theorists tended to attribute price fluctuations to the monetary factor without examining the underlying economic and psychological conditions responsible for changes in quantity and velocity. The simple income theorists, on the other hand, attribute price fluctuations to changes in income without examining the influence of the quantity of money. Is such exclusiveness really necessary? The depression years showed the possibility of fluctuations in expenditure without alterations in the amount of money, but it is sheer myopia not to see that since 1940 the greatly enlarged money supply throughout the world is the primary reason for larger incomes and higher prices. The error of the traditional quantity theory persisting through Irving Fisher was threefold: (1) It did not explain the underlying economic facts and expectations responsible for expansion and contraction in the volume of circulating media and its velocity. (2) It assumed velocity to be constant. (3) It did not explicitly show the process by which money affected prices through its effect on income. Recent income-expenditure analysis attempts to remedy the first two deficiencies by analyzing the causes of business fluctuations and it supplies the third need with the Keynesian formula $Y = C + I$. Substitute MV (income velocity) for Y , and PT for $C + I$, and the relationships are apparent. In utilizing the income theory, we need not therefore minimize the great contribution of the quantity theory and the light which it has thrown on general price changes throughout history, nor should we discard the experience of centuries that changes in the quantity of money have been the most important single cause of depreciation in its value.

Professor Alvin Hansen, however, in presenting the income theory sets up an opposition between it and the quantity theory saying: "It is the volume of expenditures, not the quantity of money, to which primary attention must be given," *Monetary Theory and Fiscal Policy*, Alvin H. Hansen (New York, 1949), p. 83. We must agree that the total of MV is more significant than M alone or V alone but it does not seem possible either a priori or from experience to say whether it is M or V that is always more important. Here we need recourse to the concepts of limiting and strategic factors (*Institutional Economics*, John R. Commons, [New York, 1933], p. 89). In depression V seems to be the strategic factor; to prevent a boom M must be controlled by the monetary authority. Hansen shows the inclination to minimize the importance of the quantity of money in quoting Keynes: "According to the quantity theory, if you first 'let out your belt' you will in consequence of this action necessarily grow fat!" (p. 85). This is a good criticism of the unfounded belief of Warren in 1933 that increasing the number of gold dollars would automatically raise prices, or for that matter, of any belief that money acts upon prices directly regardless of the willingness to spend, or without affecting incomes through consumption and investment, but it is of limited value to explain inflation. Looking back at the trend of prices since 1914, in the United States and Western Europe, I wonder how many would deny that the quantity of money was primary in monetary depreciation; or that it has been so since the last war in much of the world. We let out our monetary belt and prices rose! And if we had not let it out prices and incomes would not have risen anywhere near as much.

At the close of the war the supply of money was ample to sustain a rise in prices and its velocity was low by all past standards.³ This inflationary monetary potential was able to support the 50 per cent rise in wholesale prices which took place from the end of price control in the spring of 1946 to the summer of 1948 and is still capable of supporting a further inflation. During this period the Treasury paid off bank debt of approximately 9 billion dollars but this was offset by an approximately equal expansion of member bank loans which the Federal Reserve System could not prevent because of its policy of supporting the government bond market. Interpreting the effect of this increase in the money supply according to the strict quantity theory, it could be held responsible for about 10 per cent of the price rise. But the actual effect was most likely greater than 10 per cent, because these funds were placed in strategic hands and probably had a greater velocity than the rest of demand deposits. Bankers, however, contend that these loans were not inflationary because they were used to overcome bottlenecks, to supply deficiencies, and otherwise to augment the supply of goods which, they contend, with considerable merit, was ultimately deflationary.⁴ On the whole, however, there is little doubt that the predominant cause of inflation was not treasury policy or bank policy but the release of idle balances to satisfy a pent-up demand for goods, raising prices, creating full employment, and with it an increased demand for labor which enabled workers to win wage increases.

Because of the lag of wages behind the cost of living, labor leaders contend that higher wages did not cause higher prices but were caused by them. This argument is only half correct. The wage effect was two-fold: the pushing or cost effect, and the pulling or demand effect. Increased wages raise marginal costs and hence the price at which output can be supplied. The labor leaders are correct in so far as wage increases as costs did not push up prices; prices were pulled up by a market demand great enough to absorb the entire output at prices yielding substantial profits. In industries operating under competition, wage increases were mainly excuses for price increases, not their cause. In these industries, of which agriculture, cotton textiles, and meat packing

³ For a summary statement on supply of money and liquid assets see *Statement of Mariner S. Eccles, Chairman, Board of Governors, Federal Reserve System, Hearing before the Joint Committee on the Economic Report, Nov. 25, 1947* (Washington, 1948), and Senate Report No. 1565, *High Prices of Consumer Goods* (Washington, 1948), p. 29. The velocity of deposits between 1921 and 1929 in one hundred leading cities ranged between 21 and 23. It fell to lower levels in the 1930's ranging between 13 and 19. In 1945 it was only 9.7; in 1946, 10.0; in 1947, 12.0; and in 1948, 12.9.

⁴ See testimony of Edward E. Brown, representing the Federal Advisory Council, *Hearings before the Joint Committee on the Economic Report, 80th Congress, 1st Session, Dec. 9, 1947*.

are striking examples, prices would have been the same even under the supposititious case that wages were paid by the government and wage costs to the manufacturer had been zero; or to state it less strikingly but more realistically, even if wage costs to the producer had been much less than they actually were. Changes in wage costs cannot therefore account for changes in the prices of competitive goods sold at equilibrium prices during the inflationary period.

They were, however, an important factor in regulated industry such as railroads and electric utilities where increased costs had to be compensated by higher rates; and in industries pursuing "price policies" based on costs which induced them to "underprice" their output. Steel is a notable example of the latter. Subject to these modifications, labor's contention that the "cost effect" did not raise prices is largely correct. Not so, however, the demand effect.

Higher payrolls raised prices because they increased the total demand for goods. Payrolls rose because of both greater employment and higher wages. Professor Sumner H. Slichter shows that between 1945 and 1947 increased demand due to higher wages accounts for only about one-half of the increase in prices, the other half being attributable to greater employment, and the expenditures of other groups.⁵ Higher payrolls raised the price of farm products and helped sustain the higher price level at which manufactured goods had to be sold. As these prices rose, labor again asked for a second and then a third round which continued to have the same results. The excessive cash holdings were thus translated first into consumer demand, then into higher prices, then into higher wages and incomes, and again into demand, prices, incomes, expenditures and so on in the manner described. Forces other than labor also contributing to the inflation were the higher incomes and expenditures of farmers, proprietors and other high-income groups, the eagerness to procure goods, dishoarding, reduction in the proportion of savings, the growth of consumer credit, expenditures for new plant and equipment, the growth in mortgage debt on urban real estate, and large federal and local expenditures for domestic and international purposes.

The wage-price spiral was, therefore, a cause of inflation but not the sole cause nor even a sufficient cause to bring about the degree or price change that has taken place. More properly the spiral might be designated as an income-expenditure spiral. And finally, as will be shown, the wage-price spiral is not an exclusive product of unionism but has existed in every inflation regardless of the organization of the

⁵ *Higher Payrolls Raised the Price of Farm Wages and Prices*, An address before the Academy of Political Science, Columbia University, Vol. XXIII, No. 1 (May, 1948), pp. 50-51.

labor market and would have existed in the contemporary scene even had there been a competitive labor market.

There is no reason to believe that prices would have risen less even if labor unions had been weak or nonexistent. Labor unions were a negligible factor in our previous great inflations—that of the American Revolutionary War, the War of 1812, the Civil War, and World War I. Nor have they been a predominant factor in the European inflations following the first world war or those in Hungary, Austria, Germany, Italy, France, China or Japan after the last war. Past experience shows that even in a competitive labor market wages rise along with prices, subject to lag, in any price spiral.

It might even be contended with considerable justification that the existence of organized labor has been an anti-inflationary force in so far as it created a fear of future wage rigidity and thus caused employers to resist the upward movement in wages and prices. Many administered prices were deliberately kept down below equilibrium market prices. Manufacturers seemed to have been motivated in this by the desire to maintain business stability, to retain consumer good will, to prevent public intervention, and to keep their wage costs and prices at a long-run equilibrium level. The expected rigidity of wage rates in face of a future fall in demand, along with these other factors, operated to keep prices and wages lower than they might have been under competition.⁶ In a completely competitive economy with producers and workers both seeking to maximize immediate money gain, the upward spiral would probably have been faster and prices higher than in the present regimen of a mixture of monopoly and competition.

Accordingly, it seems reasonable to offer the following conclusions regarding the effect of unionism on prices. (1) The wage-price spiral has always existed, with or without unionism. (2) Wages as a cost did not markedly influence market prices of goods sold under competition. (3) In so far as the selling prices of many important manufactures were less than equilibrium prices and producers were governed by the notion of a "reasonable" profit, wage costs had some influence on administered prices of "monopolists." (4) Wage costs also affected governmentally regulated prices. (5) Under conditions of "perfect competition" throughout the economy, prices would probably have risen faster but wages would have lagged. (6) Assuming monopolistic competition among producers but perfect competition among workers (the position of the anti-unionists), prices would have risen but wages would have lagged even more. (7) Fear of wage rigidity in the slump was one of the reasons that "monopolistic" producers kept prices and wages

⁶ See *Profits—Report of a Subcommittee of the Joint Committee on the Economic Report* (Washington, 1949), pp. 121-26.

lower than they might have been in a competitive labor market. (8) The net influence of trade unionism has been to reduce the wage lag somewhat, but its effect on competitive prices has been negligible and its effect on administered prices, though obscure, appears to have been two-fold, to raise these prices as wages rose but to keep them from rising as high as they might have done had producers not feared future effects of wage rigidity.

III

Let us now consider the effect of a changed distribution of income, whether brought about by trade unionism or any other cause, upon the level of prices by operation on the demand side of the equation. The price-output effect will depend in the first instance upon the way in which such a change affects the composition of and the total expenditure. Labor leaders contended in 1947 that the wage lag at that time would bring about underconsumption, failure of demand, lower investment, lower prices and depression. They were supported in this Hobsonian or maldistributionist theory by the Americans for Democratic Action.⁷ The argument that higher wages increase total demand was, however, Janus faced, and was accepted also by those who blamed labor for the inflation and opposed further wage increases. Both of these views were erroneous at the time they were presented, for aggregate demand was already excessive at the existing price level, and prices were bound to rise whether in response to the demands of workers or of other segments of the population. The diversion of income away from labor would have altered the composition but not the total amount of expenditure: it might have created a smaller rise in the prices of foods and clothing, but probably would have increased corporate outlay for plant and equipment and would not have lessened the demand for machinery, steel, automobiles, refrigerators and other goods in demand by all groups of the population, and being bought not only out of income but out of savings and by the creation of new debt. Lower wages or a wage lag would simply have given a larger share of total output to others.

The theory of income maldistribution was nevertheless used by labor to attack high corporate profits, cited as a cause of impending depression and as a reason for wage increases, abolition of excise taxes and reduction in income taxes on the lower brackets.⁸ Opponents to this program, on the other hand, held that greater profits were necessary to stimulate further capital investment and thus to maintain employment.

⁷ See Testimony of Leon Henderson, *Current Price Developments and the Problem of Economic Stabilization, Hearings before the Joint Committee on the Economic Report, Eightieth Congress, July 16, 1947*, p. 477 and ff.

⁸ Henderson, *loc. cit.*

Both groups argued for more stimulation of monetary demand, when less was needed. Under the circumstances, it was the classical theory that was more appropriate; real capital investment could only be promoted by diverting resources from consumption goods to capital goods, and a real increase in consumption could be obtained only by decreasing investment. The attempt to increase one without the sacrifice of the other resulted in further monetary inflation. Whatever may be the truth of the underconsumptionist doctrine for some periods of the cycle or of the secular trend, it was obviously irrelevant during the years 1946 to 1948. Likewise, the doctrine that more monetary investment was desirable was also inadequate and misleading unless it was coupled with the proviso that it should be attained through decreased consumption. This raises the general issue whether the distribution of income has any effect at all, at any time, on the general level of prices.

During the 1930's it was widely accepted that a shift of income from the rich to the poor was favorable to employment because it resulted in increased consumption, decreased saving, and increased investment opportunities. More recently it has been said, on the contrary, that such a redistribution can have little effect on consumption because the marginal propensity to consume is about the same at all income levels.⁹ Hence a change of income from an upper bracket to a lower bracket brought about by taxation or by wage increases has practically no effect on consumption and saving and hence none on total expenditure.¹⁰ Whether this is true cannot be settled except by further data and analysis, but we may postulate it and explore its implications.

It follows from this postulate that the theory that higher wages are stimulating to consumption is invalid, that such a shift does not affect total consumption but merely causes a change in its composition; instead of necessities bought by the lower-income groups, luxuries are bought by the higher-income groups. Consequently, whatever justifica-

⁹ Harold Lubell, "Effects of Income Redistribution on Consumer Expenditures," *Am. Econ. Rev.*, Vol. XXXVII, No. 1 (March, 1947), p. 157, and Correction, *Am. Econ. Rev.*, Vol. XXXVII, No. 5 (Dec., 1947), p. 930; also J. M. Clark, *ibid.*, p. 931.

¹⁰ This proposition refers only to individual incomes, not to shifts in income from individuals to corporations. A cut in taxes on low incomes compensated by increased corporate taxes would be a form of income-redistribution which would increase consumption since the marginal propensity of individuals to consume is higher than that of corporations, which is zero. So, also, a wage increase at the expense of corporate profits. This is true because only a part of corporate profits is redistributed to stockholders and made available for consumption; the balance remains as surplus and is either invested in plant or kept as a liquid asset. Whatever, therefore, may be true of the consumption effect of inter-personal income redistribution is probably not true of redistribution between persons and corporations so long as corporate dividends remain only a fraction (at present about a half) of profits. When they reach parity, then the rôle of the corporate entity may be neglected for this problem.

tion income redistribution may have socially or ethically, it cannot be approved on the ground that it stimulates consumption. If, moreover, this postulate is true, those advocating high wage policy and progressive taxation as favorable to economic activity are standing on a shaky foundation. It also follows, however, that those who hold marginal propensities to consume to be equal at all levels of income, are inconsistent if they oppose redistributionist taxation and high wages on the ground that they prevent the saving out of higher incomes necessary to capital accumulation. Certainly if income transfers from high to low incomes do not alter consumption, they can have no effect on saving and the classic argument of the nineteenth century that income concentration is necessary to capital accumulation ceases to have validity in this decade of the twentieth century. As mentioned in footnote 10, however, this argument is of doubtful validity so far as transfers from corporate profits to wages is concerned so long as corporate profits are not paid out as dividends. Applied to the question here at issue, it follows that the diminution of the wage lag by unionism lowered profits below what they might have been with the individual wage bargain, increased demand for consumption somewhat, and was thus inflationary. Since, moreover, this increment of wage income was probably subjected to lower rates than the corporate tax, it also diminished the United States Treasury surplus. Within these limits trade unionism was inflationary in so far as it diminished the wage lag that experience has shown might have existed in a more competitive labor market.

As regards personal income distribution, however, those who hold to the assumption of equi-marginal consumption propensities, are estopped from contending that increased wages are inflationary when they are obtained at the expense of higher income groups.¹¹ If redistribution does not increase consumption, higher labor incomes are neither stimulating in depression nor inflationary in a boom. For policy purposes we must apply this inference impartially. Marginal propensities to consume are equal or unequal independent of the use to which this fact may be put; it makes no difference whether we use it to argue against redistribution on the ground that it does not augment consumption or for redistribution on the ground that it does not diminish savings. We can argue for either, depending on our interests or sentiments. Indeed the only possible

Both Lubell and Clark (citation note 9) also neglect the differential rates of taxes applied to low and high incomes. Redistribution from high to low levels of income would increase the total of disposable income, and in the absence of a tax change, would decrease government revenues, all of which is favorable to consumption. In the long run, however, this qualification would not be important because tax policy would have to be adjusted to produce the same revenues and hence to maintain the same level of disposable income.

¹¹ Cf. Bronfenbrenner, *op. cit.*, pp. 382-84.

position consistent with the postulate of equi-marginal propensities is that the distribution of income is neutral in its effect on prices or economic activity.

The conditions under which income distribution is neutral or unneutral may be classified as follows: (1) Distribution is neutral under both the Keynesian and Classical hypotheses if marginal propensities to consume are equal. (2) Distribution is always neutral, however, under the classical theory regardless of the various propensities to consume because the relations between consumption, saving and investment are so regulated by the rate of interest as to induce full utilization of resources. (3) Under the Keynesian theory this equilibrating function is denied to the rate of interest, but distribution is still neutral so long as new investment outlets are equivalent to the amount the community desires to save, whether large or small. (4) Distribution becomes unneutral under the Keynesian theory only if it results in a desire to save more than the community is willing to invest. (5) Distribution with unequal marginal consumption propensities can be either neutral or unneutral under Keynesian hypotheses, depending upon the amount of saving (*ex ante*) and investment produced by the particular economic situation. If desired savings are greater than investment, unequal distribution is depressing; if they are equal, it is neutral. If, on the contrary, distribution makes desired savings less than investment, income distribution is inflationary.

IV

During the boom period, investment was more than adequate to offset desired saving. From the evidence showing the pressing demand for both consumption and capital goods in the two years under discussion, we are warranted in denying the relevance of the underconsumptionist doctrine of insufficient demand as well as the opposite, the lack of investment incentives. Consumption and investment combined were more than sufficient fully to utilize all resources at existing prices. Had wages been lower, individual savings would likely have fallen further in the attempt to maintain living standards, and corporations who disbursed only about one-third of profits to stockholders would have had additional funds for plant expansion. This might have induced additional capital formation or smaller borrowings. A greater wage lag, as postulated, would accordingly have resulted neither in depression, as the unions feared, nor in deflation, nor in price stability, but merely in a distribution of income less favorable to labor. With the above qualifications in respect to corporations we may reject the view that trade unionism was responsible for inflation because its monopolistic control over the labor market enabled it to diminish the wage lag that probably

would have ensued in a competitive labor market.¹² Substantially the same inflation would have occurred had wages lagged to the same extent as in previous inflationary periods.

Since Keynes we all seem to be too much obsessed with opposing theories of underconsumption, lack of investment incentives, too little or too much saving, optimum consumption-investment relations, excessive profits, and the like, which have little relevance to the recent period when excessive demand from all sources was made possible by a huge money supply. The simpler postulates of classical economics and the quantity theory of money applied with an eye to the lessons of history give us conclusions which, though less profound in terms of more recent economics, are closer to the facts.

To hold trade unions blameless for the inflation may seem to overstate the case, for it seems to be contrary to the fact that by means of strikes and threats of strikes real wages have been jacked up in such industries as coal and cotton textiles. We must not, however, confuse changes in the wage structure with changes in the general wage level. Unskilled and low paid workers seem to have gained relatively to high paid workers. Can we be certain that under conditions of competition sufficient labor could have been obtained in coal mines and in textile mills without these wage increases? May it not be found that the relative plentifulness of unskilled labor is disappearing and the former large pay differentials between skilled and unskilled workers are being narrowed? In each period, prosperity or depression, forces exist which change price relationships, raising some prices and lowering others, and some prices always appear to be "too high," in both prosperity and depression. Relatively to other prices, building costs were high during the depressed 1930's, and they are absolutely and relatively higher today. Yet we find numerous instances in which contractors were hiring building trade workers at rates considerably in excess of union wage scales and finding buyers able and willing to pay for housing at inflated costs. Trade unions may have raised particular prices above competitive levels, but not sufficiently so to raise the whole price level.

In 1919 Keynes condemned the governments of Europe as "reckless in their methods as well as weak" when they sought "to direct on to a class known as 'profiteers' the popular indignation" against inflation. "These 'profiteers,'" he said, "are, broadly speaking, the entrepreneur class of capitalists that is to say, the active and constructive element in the whole capitalist society, who in a period of rapidly rising prices can-

¹² "The inflationary significance of union labor monopolies at full employment should be clear, along with the futility of preaching to union leaders. Union members are pushing up prices by adding to money cost and pulling them up by adding to money demand, with every round of wage increases." Bronfenbrenner, *ibid.*, p. 383.

not but get rich quick whether they wish it or desire it or not."¹³ We have improved on the previous generation by adding labor leaders to our scapegoats, and now have the choice of blaming inflation either on business or labor unions, and we may indulge either propensity with the same justification, that is, substantially none at all.¹⁴

V

Although trade unionism as a fomenter of inflation does not come off so badly when its results are contrasted with those to be expected in a competitive labor market, that does not end the matter. We must also inquire whether wage policy could have been executed in a manner less conducive to inflation. If popular interest, criticism and acclaim, and the writings of economists and publicists are any criterion for judging opinion, it is widely believed to have been within the power of labor unions either to create or to undo the price movement. It is implied that if unions had stabilized wage rates, refused to ask for or to accept wage increases and if manufacturers had refused to take additional profits, the price level would have been lower. Such action, it is clear, would not have inhibited others with large cash balances from bidding for goods and raising prices in grey markets. Price stabilization by voluntary action was impossible. It would have required concerted action by the whole society in the form of price and wage control.

What was wanted by the critics of labor was a sacrificial wage policy for the purpose of keeping down prices. This fanciful policy would have reduced demand for food and clothing but it would also have created a large wage lag with the effects already described, and lessened inflation wholly at the expense of organized labor. Unions would have disintegrated or the leadership would have lost control over the membership if they had attempted to carry out such a policy. Why anyone would have expected organized labor to voluntarily follow a sacrificial wage policy, in view of the abandonment of price control, is a problem for

¹³ J. M. Keynes, *Essays in Persuasion* (London, 1933), p. 78.

¹⁴ During the sixteenth century when prices were constantly rising because of the influx of gold from America, Bishop Latimer (1548) put the blame on "landlords and rentraisers, step-lordes, unnatural lordes," when it was the landowners who were being expropriated by the rise in prices because of long term leases. In his *An Historical Inquiry into the Production and Consumption of the Precious Metals* (Philadelphia, 1832), William Jacob aptly says: "The bishop was evidently unaware that the influx of gold and silver from the new world was producing a gradual increase of prices, and like other persons in that age sought, with more zeal than judgment, to find the causes of this extraordinary phenomenon. He attributes this, which he treated as a great evil, to enclosures to sheep walks, to regraters, forestallers, and to any cause but the true one, which in his warmth against his neighbours he had totally overlooked, or was unacquainted with" (p. 245). The chief distinction between 1548 and 1948 is that Bishop Latimer expressed these views in his preachers to the King in the service of God and country, whereas we now explain them to Congress to defend pressure groups and vested interests.

social psychology, not economics. Indeed, the implementation of such a policy would have been possible only within the framework of the corporative state.

A sacrificial wage policy would, however, have reduced labor's share of the national income. Salaries, wages and other labor income rose by \$17 billions between 1946 and 1948, proprietors and rental income increased by \$12 billions in the same period and corporate profits after taxes rose \$10 billions, altogether adding up to \$39 billions. If labor had had no wage increases, part of the \$17 billions additional payroll would have been diverted to other groups and prices would still have risen from the impetus provided by non-labor expenditures, though perhaps not quite so much.

Although the sacrificial wage proposal may seem foolish, we should not cavil at it nor conclude that criticism of unionism has been entirely footless. Admonitions, threats, and other forms of popular exhortation coupled with homilies on "boom and bust" contributed to uncertainty in the public mind, tempered optimism with pessimism, and exerted a braking influence upon the whole community. Public opinion, political threats, and economic opinion biased by its class origin, far from being injurious, had the salutary effect of slowing down the wage and price boom in the administered sectors of the economy and making it possible for wages of white collared workers, to catch up with the trend.¹⁵

We conclude, then, that inflation since the end of price control has probably been smaller in this regimen of administered prices and collective bargaining than it would have been in a society modeled after perfect competition; that the price increase has been no greater and perhaps has been smaller because wages were determined by voluntary collective bargaining rather than by individualistic competition; that a voluntary sacrificial policy would not have stopped inflation and that it is, moreover, an anachronism, impossible of achievement, and not to

¹⁵ It would, of course, have been better if the federal budget had run a larger surplus and if the Federal Reserve System had been able to prevent the expansion of member bank loans. By the summer of 1948 the preachers of the American Bankers Association who had opposed Federal Reserve credit restriction, were creating doubt in the minds of potential borrowers about their solvency, and of bankers about the future value of their loans, causing them to raise standards, diminish the proportions lent on real estate, and otherwise to tighten the credit market. All these things were to the good. It seems unwarranted, therefore, to treat the exhortation process cavalierly as a foolish attempt to persuade individuals to act altruistically contrary to their economic interests. Political and economic exhortation is much like the ecclesiastical where the urge to do the will of God is always accompanied by threats of consequences for disobedience. It is the danger of economic and political reprisal which makes businessmen and labor leaders hesitate to exploit their own interests fully; the fear of future losses which causes bankers to tighten credit even when they still can obtain plentiful reserves. We tend to disparage moral suasion and qualitative controls because we desire more effective quantitative control over money and credit, but this need not make us believe them to be wholly ineffective.

be expected. It is, however, conceded that the criticism of trade unionism and preachments against inflation probably exerted a favorable psychological effect in diminishing optimism, creating fear of a depression, lowering the stock market, and thus slowing up the inflationary trend.

VI

Let us now turn to the contention that union policies are necessarily inconsistent with full employment at a stable price level. The historical origin of this view is found in the recovery ending in 1937 when wages began to rise rapidly even with many million unemployed, but its present re-emphasis and elucidation can be credited to the psychological impact of the war and postwar experience to which we have just alluded. Our examination of this period did not show that union wage policy may not be inflationary in the future, it merely showed that it had not been so. We have, however, rid ourselves of the misleading and mischievous interpretation that labor has been a driving inflationary force, and thus have cleared the path for a consideration of the incidence of wage policy unbiased by this implicit preconception.

The inflationary influence of unionism is predicated on the basic postulate, assumed to be a categorical *judgment* of fact, that union wage demands will tend to exceed increases in physical productivity. This postulate may be designated as Lewis' Law.¹⁶ For a short time, it is

¹⁶ Although a law is usually named after its discoverer, I have taken the liberty, in this instance, of naming it after its most eminent practitioner, Mr. John L. Lewis, of the United Mine Workers. It should be noticed that this law applies to the general level of wage rates, not to any particular scale.

Many economists have remarked upon this tendency, but only a few will be quoted here. Professor Sumner H. Slichter has said: "Unions are far more likely to force up wages faster than the engineers and managers raise output per man-hour—perhaps 2 per cent or 3 per cent a year faster, perhaps even more. The difference between the rise in money wages and the rise in output per man-hour will have to be compensated by an advance in prices. For example, if output rises by 3 per cent a year and money wages by 5 per cent a year, prices will need to rise by about 2 per cent a year. Otherwise, there will be a creeping increase in unemployment." *Wages and Prices, An Address before the Academy of Political Science* (Columbia University, 1948), pp. 60-61. The same argument is made in his *The American Economy* (New York, Knopf, 1948), pp. 42-45. Professor Gottfried Haberler says: "The powerful trade unions are now in the habit of demanding wage increases of 10 per cent or more per year. Since labor productivity cannot possibly rise at that rate, it follows that prices must rise or unemployment appear. In the long run, union policy will probably be the main obstacle to maintaining a high level of employment for any length of time without a rapidly rising price level." "Causes and Cures of Inflation," *Rev. Econ. Stat.*, Vol. XXX, No. 1 (Feb., 1948), p. 14. For similar views see Bronfenbrenner, *op. cit.*, pp. 378, 382-88 and G. M. W. Reder, "The Theoretical Problems of a National Wage-Price Policy," *Canadian Jour. Econ.*, Vol. XIV (Feb., 1948), pp. 46-61. For the view that the inflationary dangers of unionism can be confined see John T. Dunlop, "Wage-Price Relations at High Level Employment, Proceedings, Am. Econ. Rev.", Vol. XXXVII, No. 2 (May, 1947), pp. 252-53; and the same author's "Productivity and the Wage Structure" in *Income, Employment and Public Policy, Essays in Honor of Alvin H. Hansen* (1948), p. 341. On the general problem see: O. W. Phelps, "Collective Bargaining,

conceivable although not very likely, that higher wages might come out of profits, but this source would soon be dried up and higher wage rates, not offset by increased productivity, would result in higher prices. If the producer could not sell at such prices, unemployment would follow. Wage increases in excess of productivity are therefore inflationary, but still consistent with full employment, if they can be recouped by the producer in higher prices; they are deflationary and will result in unemployment when they cannot be passed on to the consumer. The first condition existed from 1946 to 1948, the second may result whenever the incessant demand for goods abates without a relaxation of higher wage demands.

We have unionism and we desire full employment and stable prices. If the co-existence of all three is impossible, we must choose any combination of two: (1) unionism and full employment (with inflation); (2) unionism and stable prices (without full employment); (3) full employment and stable prices (without unionism). That is the implication of Lewis' Law. Whether the supposed alternatives are in fact actual depends solely on the validity of this law.

The evidential basis for this generalization is found in the inherent desire of workers for higher wages and the widespread belief in their possibility; the increasing strength of unionism; the internal political structure of organized labor requiring leaders to obtain continually wage increases in order to stay in power; and the impossibility of a non-inflationary policy by any single union so long as each union acts independently to advance wages, costs and prices in its industry. Economists now exploring these fields are rediscovering that labor unions act like a nation assuming sovereignty over jobs, and function as a political organization with manifold social, political and organizational aims known to students of labor for half a century. These rediscoveries, though vitiating the naïve assumption that unions operate as the economic man of simplified price theory who was always maximizing something, still need not cause us to doubt that higher wages are and always have been an essential aim of unionism. It follows, accordingly, that if labor could achieve its wishes without opposition from employers or consumers, money wages would rise. If, moreover, a high employment policy is designed to furnish jobs for all at a price set by the union, then it is obvious that the level of wages will be wholly within labor's discretion. This does not, however, end the matter, but rather raises the question whether such a policy is desirable. And if not, whether the aim of full employment necessarily requires that union demands always be acceded

Keynesian Model," *Am. Econ. Rev.*, Vol. XXXVIII, No. 4 (Sept., 1948), pp. 581-97 and H. W. Singer, "Wage Policy and Full Employment," *Econ. Jour.*, Vol. LVII, No. 228 (Dec., 1947), pp. 438-55.

to, regardless of price effects. The issue is not whether unions would like higher wages; it is rather whether they will pursue this aim regardless of opposition and whether such opposition must lead to unemployment.

Those who reckon that labor will have its will at all costs are impressed by the growing economic and political power of organized labor, and its determination to use that power to maintain full employment at rising wages.¹⁷ The wage policies growing out of the demands of individual unions, though uncoordinated by design, soon form a national wage pattern and become imbedded in the price system where they remain unless dislodged by some powerful force. Depression is such a force. But it is believed that if depression is avoided, wages will become flexible upward and inflexible downward, and prices likewise will rise during the boom and remain stable in the recession.

The conjectural generalization which we have branded Lewis' Law does not state an inherent propensity of human beings based on physiological psychology or a behavior pattern of social psychology. Union behavior is not tropismatic, intuitive, habitual or otherwise irrationally invariant heedless of circumstances. High wage demands though deeply ingrained into union custom are modified whenever unions are opposed by forces which are capable of defeating their will. What are these forces?

In a community with a limited money supply, the employer will resist wage increases when they can not be passed on to the consumer and must come out of his profits. While it is true that the abstract danger of inflation will deter no particular union, the concrete fact that the employer can not grant their demands without losing his market and bankrupting himself, will cause unions to take thought. Lewis' Law as a statement of union power is therefore a fiction rather than a fact; a generalization valid only for inflationary periods. We must not think of labor's behavior as following a fixed pattern, but rather as it has already shown itself to be: political in character and adjustable to the hard facts of working, earning, living, and surviving. Labor leaders may act foolishly and at times impetuously, but they will not continually beat their heads against a stone wall. The question remains, therefore, whether the policy of price stability is strong enough to stand against the threats against it, or merely a house of straw which can be blown over with the first puff.

¹⁷ The postwar period, however, provides a misleading basis for judging union wage policy. True, the unions continually demanded higher wages, but this action was part of an inflationary movement having more deep-seated causes to which the wage-price spiral was a response. The apparent success of union wage policy was, moreover, deceptive, because of the lag in real wages. See Dunlop, *op. cit.*, p. 253 and Sumner H. Slichter, *Wages and Prices*, pp. 51 and 52.

The process of labor union inflation is envisioned as follows: (1) Labor will demand higher wages and threaten a strike. (2) Employers will be forced to grant these requests or to cease operations. (3) They will prefer to raise both wages and prices. (4) Higher prices will require additional bank borrowing, thus increasing the quantity of money. (5) Member banks will lend additional funds if security is ample and if they have excess reserves regardless of the effect on the level of prices. (6) Since credit can only be restricted by Federal Reserve policy, the Federal Reserve System will be forced to choose between preventing inflation or causing unemployment. (7) Faced with these alternatives, it is believed that central banking authorities will always choose the inflationary path or if they should refuse to do so, business and labor will have them replaced by officials who will aid and abet the inflationary trend in the name of full employment.

VII

Inflation induced by organized labor must have its matrix in full employment; but full employment could arise from two sources: private demand for consumption and investment, or from governmental spending. In the first case, bank credits will be given to private industry, and in the second, to the government, but in both the net effect will be an expansion of the volume of bank deposits. Implicit in the fear of business inflation is the assumption that private aggregate demand will be sufficient to promote full employment if left unhindered by restrictive banking policy. Credit expansion will come via the classical route of business borrowing, and bank assets will increasingly take the form of business loans. Under these circumstances, the banks will be in a position to thwart prosperity and inflation by refusing to grant inflationary credits, but they will not be needed to promote it.

The fear of inflation also arises from the belief that full employment and stable prices are just as inconsistent with a privately produced prosperity as with a governmentally induced full-employment program, wage policy being the same in either case. In the event of a depression, wages will remain rigid. Then as unemployment grows, public works will replace private demand and full employment will return. Even before the level of output and employment reaches a maximum, labor will again demand higher wages which will be granted by increasing the public debt and manufacturing new credits. Prices will then rise further until the next depression, when the process will again be repeated. It can be pointed out that wages and prices rose at an increasing rate just preceding the 1937 depression even while many million men were still unemployed, and Professor Slichter has shown that it took a rapidly increasing level of expenditure to produce additional output during the

war period. This is, of course, the barrier that Keynes envisioned when he showed that full employment could be reached without inflation only if output was fully elastic until full employment was reached, after which increasing expenditure would merely raise prices.

This inflationary tendency created by labor policy would be present in both types of full employment and must be further distinguished from other cost-raising physical and economic factors operating independent of labor policy such as bottlenecks, material scarcities, laxness of labor and management, and rising real costs due to insufficient capacity for a full-employment economy.¹⁸ With business inflation, labor will be striking against the individual employer and exerting pressure for credit expansion on the Federal Reserve System; in the case of government spending, labor would have to put political pressure on Congress to increase the size of the deficit. In the former case it seems doubtful that labor can be successful in causing a price rise so long as the money supply is not excessive. Except in periods of high demand, labor is continuously beset by fears of unemployment. Business inflations, moreover, instead of being inaugurated by wage demands, come from optimistic expectations and bank borrowings which raise prices ahead of wages. The need for additional credits to pay higher wages has not, and is not likely to become the initiating force in credit expansion because no individual producer can act on the assumption that his own market will be expanded by an increase in his own payrolls. It seems unlikely, therefore, that labor can alter the traditional wage lag into a wage lead.

Although attempts of individual unions to keep their wages "in line" with others brings some semblance of a national wage policy, still their actions are not concerted enough to produce a general inflationary trend. Labor is not organized as yet into one big union making national agreements affecting all workers, and even if this were true, factory payrolls would still not be the only source of demand for goods. Producers could not simply grant increased wages, raise prices, and then ask the banks to finance such a policy; they would still need to worry about pricing themselves out of the market.

If inflation threatens, in spite of all these obstacles, it is still the function of the central bank to make it apparent that the necessary credits to sustain it will not be forthcoming. Such a monetary policy will increase employer resistance, weaken the market for goods, and lessen the will to strike. It is not by raising the cost of credit, but by threatening to curtail its amount, at any cost if necessary, that the central bank exerts pressure against rising wage and price levels.

¹⁸ Rising real costs in short-run cyclical fluctuations are probably less likely than constant costs, except where capacity is insufficient. See Alvin H. Hansen, "Cost Functions and Full Employment," *Am. Econ. Rev.*, Vol. XXXVII, No. 4 (Sept., 1947), p. 552.

VIII

The belief that organized labor can control the price level derives to a large degree also from the conception of trade unions as monopolists. We should therefore examine the nature and extent of labor monopoly as it bears on credit and price policy.

Labor monopoly is intrinsically different, and also less powerful than monopoly exercised by business firms. According to the theory of monopoly, the producer of any product has monopoly power when he can raise his price without losing all of his market. He can vary production by small increments according to its effect on costs and revenue so as to yield the highest net profit. He does not lose his entire market if he raises his price as he would under perfect competition. Labor, on the other hand, bargains for all members of the union; in striking for a 5 per cent wage increase it must be willing to sacrifice not an increment of employment and income, but all employment and income for the duration of the strike. Even the most powerful union is in the same theoretical position as a seller under perfect competition, who must sell at the market price or not at all. The loss to the worker is the total value of his labor for the period of the strike, plus the possible loss of employment after he wins the strike in so far as he has priced himself out of the market; the loss of the employer is not his total product but only his fixed costs and possible profit. No producer monopolist operates on the all-or-none basis —he need not risk selling no goods at all if he raises his price by a few per cent. Yet this is labor's predicament in a strike. It is, therefore, misleading to think of labor union monopoly power, based as it is on the small resources of its members and the pitifully small power to resist long unemployment without suffering and starvation, as equal to the power of industrial monopoly, backed by huge financial resources and able to sustain losses for a long period of time without impairing its financial health and stability.

But let us grant for the sake of analysis that the unions can overcome the resistance of the employer and that he seeks to obtain additional funds to finance a higher wage bill. Where is he to get them? When his profit margin is seriously impaired, earnings will be low and the stock and the bond markets will be closed to him. If he seeks to borrow from the banks, they will be doubtful about financing him. But supposing that he overcomes these disabilities and is still able to make a financial showing, the banks can loan only if they have excess reserves which under normal conditions are subject to central banking control. To be successful then in their assumed policy, labor unions must also control banking policy.

IX.

The Board of Governors of the Federal Reserve System by predilection, previous training, experience and personal association are not likely to give extraordinary weight to a policy promoted by labor leaders, particularly when in doing so they would need go counter to other elements in the community and to the historical function and traditions of central bankers.

Since the war they have failed to restrict credit only because they felt it a paramount duty to maintain the government bond market. It is true that in the past credit has not been readily curtailed when the initiative to credit expansion came from the profit expectations of business and when such curtailment augured depression. Prevention of inflation is, however, now an established national policy accepted by workers even more so than by farmers and other elements of the population, and it seems quite unlikely that labor leaders would try to force inflation upon the Federal Reserve System.¹⁹

Once inflation gets under way, it creates interests favorable to its continuance and it is therefore the duty of central banks to maintain such stability that these interests will not have a chance to become powerful. That central bankers find opposition to these policies is not novel. Throughout the history of central banking, the monetary authority has always met with resistance when it sought to stop inflation by credit restriction. Those committed to higher prices for commodities, real estate and securities will oppose a restrictionist policy; business firms selling on credit will find their sales curtailed, commercial bankers seeking profits through further loan expansion may view it as an interference with their operations, merchants who might be thrown into bankruptcy by a price decline, speculators, brokers and wholesalers who have large commitments on narrow margins, will urge that the inflation be carried on just a bit further, until they presumably will be able to unload. Promoters of new enterprises, security dealers heavily extended on new flotations, real estate speculators—all will condemn a policy which will cause heavy loss. Farmers hoping to unload crops at rising

¹⁹ Price stabilization is, however, not an absolute end to be pursued under all circumstances. A general rise in prices is not always monetary in origin; it may be due either to an abundance of money or to a scarcity of goods. It has never been considered to be within the province of a central bank to prevent a price rise originating in a general crop failure or a breakdown of production such as happened in Europe at the end of the war. The rise in agricultural prices in this country during 1946 and 1947 resulted from small crops and intense domestic and foreign need for food. It could have been prevented only by a policy which would have created a mass of unemployed who were unable to buy food. In such circumstances, monetary policy should not be used to maintain a stable price level. In this as in other matters of economic policy, the remedy for a situation must depend upon correct analysis of its causes; banks can contain inflation only in so far as it is caused by the money supply.

prices will see in it a plot to deprive them of their income. In the history of this country, land speculators cursed the specie circular which burst their bubble in 1837, farmers and railroad interests among others fought the resumption of specie payments and favored free silver and greenbackism. Since the Federal Reserve System was inaugurated it has been criticized for every major credit restriction: W. G. P. Harding was driven off the Federal Reserve Board because of the myth that the Federal Reserve had conspired to deflate the farmer in 1920; in 1925 easy money created to help put Britain on the gold standard aided a stock market inflation which had many protagonists until the break in 1929, a slight tightening of credit in 1937 called forth wide criticisms, and even in the great inflation of 1946-1948, bankers, industrialists, veterans and many other patriots were averse to credit restriction.

A contraction of credit, or even a failure to expand, will create trouble for those speculating for a rise, but this is a risk which must be taken. "A crisis," says Mr. R. G. Hawtrey, "may be regarded as a struggle to maintain the standard of value."²²⁰ We can avoid the crisis by giving up the struggle and going the way of inflation, or we can face the crisis and maintain the standard of value. Central bankers must be willing to act courageously regardless of the pressures which are put upon them. We have destroyed the tabu of the gold standard which the masses of people had accepted without question as a justification for preserving the value of money, but we have not put price stability in its place. Instead, we have set up full employment as a symbol to be worshipped without realizing the sacrifices that unreasoning obedience to it might demand.

Faced with this situation, some hold that we should accept a gradually rising price level as a necessary consequence of trade unionism and full-employment policy and sacrifice the fixed-income group and creditor classes. Others suggest that fixed-income groups be abolished by making all bonds, pensions, and annuities subject to changes in the price level. All such proposals are, however, self-defeating, for if all incomes moved up together the advantage of inflation to any single group would be nil and those seeking to gain at the expense of the rest would devise other means of benefiting by price changes. The objection to inflation is its unequal incidence.

The proposal of a gradually rising price level as a deliberate national policy is, moreover, self-contradictory. Beginning in the 16th century it was possible for prices to rise over a period of 150 years as gold came into Europe from the new world. A gradual rise in prices was also possible when changes in the gold and silver supply or even in bank credit were the product of unconscious forces and were neither forecast nor deliberately planned. In a modern paper money regime, any planned

* *Currency and Credit* (London, 1923), p. 156.

inflation will be immediately discounted. If a government deliberately plans that prices will be 10 per cent higher at the end of every year than at the beginning, the anticipated price rise will be discounted at once by holders of goods and securities. They will immediately raise prices to the discounted future value and refuse to sell except at this price. It will then be found necessary to permit prices to rise at once by making more money available, and then to permit even further inflation, or to lose the purported stimulation of a gradually rising price level. In brief, a planned gradual rise in the price level is self-contradictory because it will be discounted if it is generally known, and under modern conditions, if it is planned, it will be known.²¹ The policy of a planned gradually rising price level is simply a chimera arising out of defeatism, confusion, and despair. It is compounded out of an erroneous comparison with an unplanned rise in prices, an oversimplified theory of employment, a fear of vested interests, and disillusion over the possibility of rational economic, fiscal, and monetary policy.

A policy of high employment at a stable level of prices is, on the other hand, both rational and possible. Once we are committed to such a policy, no group can hope to improve its share of the national income by means of policies leading to inflation. If any group forges recklessly ahead with such wage and price policies, it will be brought to a halt by its own folly until its policies are adjusted to the national interest. The central bank will resist inflationism and labor and business will be obliged to act accordingly. Such resistance may provoke an immediate downturn in business but the alternative of continued inflation is worse. The guaranty of opportunity by society cannot be unconditional; it requires that individuals and groups act so as to make this end possible of fulfillment.

²¹ The discounting of expectations assumes that the public acts with a reasonable amount of knowledge and intelligence which I think may be granted in this case. It also assumes that planning certain enough to be stimulating is certain enough to be discounted. Another view is, of course, possible, namely that businessmen knowing that prices are going to rise will still act as if they are remaining stable and will not discount their expectations. The latter view is taken by Thorstein Veblen: "The Federal Reserve . . . inflates the businessmen's expectations of gain, and thereby speeds up business and industry; for among the securely known facts of psychology, as touches the conduct of business, is the ingrained persuasion that the money unit is stable; (This persuasion is known not to accord with fact, but still it remains a principle of conduct. It has something like an instinctive force; or perhaps rather, it is something like a tropistic reaction, in that the presumption is acted on even when it is known to be misleading) the value of the money unit being the base-line of business transactions. Therefore, an inflation of prices is rated as an accession of wealth. Therefore such an inflation will impart confidence and buoyancy and raise great expectations, by a tropistic stimulation of the business men's sensibilities if not by logical inference; and logic is after all a feeble defense in the face of a tropistic stimulation, as is abundantly shown by the history of business cycles." *Absentee Ownership* (New York, 1923), p. 179. Far from believing that inflation would promote full employment, Veblen showed that it was followed by a "breakdown, a slaughter of the innocents, called a period of liquidation" (p. 180).

If they can not do so, then one end or the other must be sacrificed, and in the long run it would be better to sacrifice that of full employment. To sacrifice price stability will ultimately destroy the currency and create unemployment and the loss of social and economic stability. We can conclude, however, on the hopeful note that despite many contentions to the contrary, there is in the war experience and in the present structure of our society little evidence that labor has either the determination or the power to destroy price stability, social order and the life of other groups by pursuing a policy of inflationism regardless of its economic and social consequences.

X

Let us now turn to fiscally induced inflation. Although the Employment Act of 1946 does not promise full employment by means of fiscal policy, we may ask how trade unionism would impinge upon such a policy should it be adopted. If full employment is insured by governmental spending regardless of its effect on costs and prices, we may feel reasonably sure that labor will make little effort to keep its wage rates in line so as not to price itself out of the market. Producers, knowing that government will take whatever goods they produce regardless of price (as in the cost-plus contracts during the war) will have no need to resist wage demands and unions will have no hesitancy in making them. If, for example, building costs rise too high for the incomes of prospective buyers and unemployment ensues in this trade, it would seem that the industry ought to reduce its costs.²² Should government, however, assure the industry that it will provide orders whenever private business slumps, the incentive to price its product for private demand will disappear. Wages, costs and prices will rise and never slump. The error in attempting to insure full employment by the simple device of compensatory spending is that it removes all incentives for producers to adjust their costs to the private market; it assures demand for the entire national product without reference to quality and price, and provides a seller's market for goods and services at a price fixed by the sellers. To describe this guaranty is enough to condemn it.

When the Employment Act of 1946 was under consideration, it was suggested that compensatory policies should be followed only in so far as they were consistent with a stable cost of living, but no such provision was included in the act. If, therefore, we should get inflation by the route of compensatory spending under a full-employment policy, it will not be because of trade unionism alone, but because in a seller's market every element in the community would be induced to raise prices and never to lower them. The principles of functional finance sometimes

²² This is in fact the position taken by President Truman in his *Report to Congress, January, 1949*.

seem to imply that compensatory devices be used regardless of the cause of unemployment. In some circles, compensatory finance has become a dogma of economic policy with the same authority for its votaries as the "invisible hand" of Adam Smith had for the laissez-faire school, Say's Law for the neo-classicists, and surplus value for the Marxians. As a dogma, it overlooks the multiple causes of depression and forgets that the cure of unemployment must depend upon its cause. If the cause be unbalanced price relationships, such as excessive prices for houses, automobiles, etc., then the remedy is to reduce these prices, not to guaranty a market for the products of these industries at inflated levels. If the cause be underconsumption in the Hobsonian sense, then the remedy is to change the distribution of income; if the cause be inadequate investment incentives, these will need to be augmented. We conclude, then, that inflation will result from cyclical depression or stagnation only if government guarantees full employment regardless of its effect on costs or prices and pursues an inflationary policy to achieve it. Neither labor nor the central bank can prevent the consequences of such a policy; it can be prevented only by ridding ourselves of the dogmas responsible for it.

If we recognize that compensatory finance is not the sole means of maintaining aggregate demand in a free market-profit economy, we should not encourage the various economic groups in the belief that they will be protected from the consequences of their own folly by government spending. We should rather make them see the necessity of adjusting their own prices and policies so as to create a demand for their own product. It may be necessary to declare quite deliberately that government will refuse to maintain effective demand in those sectors which refuse to adjust their costs and prices to private market demand, and to use compensatory finance only when the fault does not lie in wage-price policies. Compensatory policies which look only to the aggregates of consumption and investment will create expectation for further inflation and hardly any inducement to correct basic causes of underemployment. In so far as the Keynesian Revolution has come to this, it is a purely inflationary philosophy which must end in disaster. But it need not be so. We can still take into account aggregative relations between income, consumption, savings and investment as emphasized by Malthus, Hobson, Keynes and by the underconsumptionists, without ignoring the fact that equilibrium is also conditioned by the relations between wages, costs, and prices as described by the classical tradition.

Keynes created a false disjunction between classical and aggregate equilibrium which has produced a fateful dichotomy between policies designed to promote balanced price relationships and those aimed at balanced income relationships. We need not reject the classical cost-

price balance in order to accept the Keynesian savings-investment equilibrium; we can rather accept the more reasonable conclusion that both the system of individual prices and the aggregates need to be in an optimum relationship in order to bring about full utilization of resources.

The two systems are indeed not contradictory but complementary. The truth in the classical system was its emphasis upon the need for workable relationships between individual prices to facilitate full employment; the error was the view that the rate of interest produced full employment automatically. The truth in the Keynesian system was in its emphasis upon the need for workable relationships between the aggregates of income, consumption, savings and investment which it showed were not produced automatically by the rate of interest; the error was that it assumed these aggregates could be brought into optimum relationships by manipulating the rate of interest, the quantity of money, the distribution of income, and the fiscal policy of governments. It is not necessary to accept these exclusive alternatives, and if it is not necessary, it is not desirable. To accept without modification the classical view is to ignore the aggregative relations which were emphasized by Malthus, Marx, Hobson and others before and after Keynes; to accept the compensatory view without modification is to embark upon a policy which neglects the need for incentives to adjust relative prices to market demand.

We conclude, therefore, that governmentally induced inflation must result from fiscal policy only if it is pursued without regard to the cause of underemployment; and that such a monolithic policy should be cast aside for one that is free from dogma, though not from error in comprehension and execution, but more comprehensive and hence likely to be more timely and fruitful.

XI

If the foregoing is essentially correct, we need not worry about the dire forebodings of those who deny the compatibility of trade unionism with the objectives of high employment and stable prices. We need not set out to disorganize our social life by a war on organized labor; nor let inflation rob the creditor class, the fixed-income groups, and those who have saved for old age; nor mournfully consign part of our resources to idleness and condemn our people to the humiliation and despair of large-scale unemployment. The view posing these stark alternatives, though it flows cogently from its postulates and is not without some truth, still is insufficiently factually accurate for purposes of national policy. We can, moreover, continue our efforts to maintain the high standard of living and the opportunity which full employment

makes possible, without inaugurating controls over individual prices and wages.

If we do not need to destroy unionism in order to preserve price stability, neither do we need to establish, as has been sometimes suggested, a board to formulate and enforce a national wage policy fixing the general level of wages.²³ In any event, such a board would hardly be effectual, for, if organized labor were powerful enough to force its views upon employers, bankers, and a reluctant Federal Reserve Board, it would most likely also be able to have its way with a national labor board. A Federal Reserve Board seeking to maintain sound economic conditions for the whole community does not aim its measures at any particular group such as a wage board would have to do, and in pursuit of these wider social aims, it could more easily resist the demands of any one group than could a special board set up for their specific control. Quite likely, a national wage board would be heavily weighted with labor members or public members acceptable to labor who would follow the traditional policy of accepting compromise wage increases, and resisting cuts. It is hard to visualize such a board, no matter how cogent its arguments and eloquent its expression, uncompromisingly resisting wage demands which were within its power to grant. Credit policy, on the other hand, being aimed at the control of total monetary demand leaves its allocation to the market which in turn dominates wage negotiations. An employer, resisting wage demands because the market will not stand them, is in a much stronger position to stop an inflationary rise than a wage board, which apparently has no direct financial responsibility for the result. We may, therefore, tentatively conclude that the establishment of a board to set a national wage pattern would probably be more inflationary than otherwise, and if, moreover, wages were subject to control, so would prices have to be, and we would end up in the position envisioned by those who believe that full employment is impossible without complete regimentation.

Under the circumstances, it seems wiser to continue over-all control of effective demand and to leave the rest of the economy free to adjust individual prices and wages to the resulting market. The concept of an unlimited monetary demand is, of course, inconsistent with price stability; it is this concept of which we must rid ourselves, not of trade unionism. If, however, it be found desirable to restrict, regulate or destroy monopoly, whether of business, agriculture or labor because of its effect on prices and production, that can still be done for its own sake; it need not be done in order to control the general price level. The same holds true relative to the need of rules to prevent work stoppages which may paralyze the nation or be dangerous to health and safety. The war

²³ E.g., Sumner H. Slichter, *The American Economy*, p. 44.

and postwar experiences which engendered the ideas of direct controls over prices and wages are not typical of a peacetime economy because war demand is unlimited whereas in peace the consumer can withhold purchases until prices are in line with this income. The present mixture of monopoly, unionism and competition will not operate after the model of perfect competition. We must accordingly learn to live by the more complex rules of a collective bargaining economy, but we need not yet admit that desiderata of stability and prosperity make our ultimate choice one between perfect competition and complete regimentation. These alternatives have a plausible validity so long as we do not examine too closely the reality of the postulates on which they rest, and, like much abstract theory of this type, present us with apparent alternatives true only at the limits. In a dynamic life, social adjustments, though following no fixed pattern, can be made between the extremes according to the strength of conflicting forces. This is the aim of a collective-bargaining economy with individuals who are still exposed to losses and gains as members of their group and therefore provided with strong incentives to act intelligently in their own and in the social interest.

A GENERALIZED UNCERTAINTY THEORY OF PROFIT

By J. FRED WESTON*

Introduction

The concept "profit" carries a wide variety of meanings. It is both a tool-concept used in economic analysis and a stereotype used in uncritical polemical discussions. "Profit maximization" is perhaps the most frequently used expression in discussions of the theory of the firm, yet even on this aspect of profit much disagreement and considerable confusion exist.

In 1931, Hicks commented that Knight's *Risk, Uncertainty and Profit* had "laid securely the first foundation on which any future theory of profits must rest—the dependence of profits on uncertainty."¹ Although few books (other than textbooks) discussing the nature of profit have been written since Knight's *Risk, Uncertainty, and Profit*, even these few demonstrate a continued wide range of concepts of profit. Among the risk theories, profit is variously described as (a) payment for risk-bearing; (b) payment for uncertainty-bearing; and (c) payment for the productivity of uncertainty-bearing. The functional theories are (a) payment for the entrepreneurial function,² (b) payment for ownership, and (c) payment for entrepreneurial or managerial efficiency. Imperfect competition and monopoly are also described as sources of profit.³

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¹ J. R. Hicks, "The Theory of Uncertainty and Profit," *Economica*, Vol. XI (May, 1931), p. 170.

² Entrepreneurship is itself variously defined by different writers.

³ For an explanation of the three broad categories into which profit theories have been classified, see R. A. Gordon, "Enterprise, Profits, and the Modern Corporation," *Readings in the Theory of Income Distribution* (Philadelphia, The Blakiston Company, 1946), p. 560. While it is convenient to classify theories of profit into these broad groups, there are significant differences within each group. For example, to classify Knight's theory of profit as a variant of a "risk theory" is to obscure the central doctrine of his contribution.

The articles on profit appearing in periodicals, encyclopedias, and collections of essays published during the period 1920-1945 are catalogued in the bibliography contained in *Readings in the Theory of Income Distribution*.⁴ It suggests the relative paucity of materials and the wide range of divergent theories. Few of these writings discuss the nature or sources of profit. Most of them treat some specialized aspect of profit.

Economic textbooks also reveal a divergent array of descriptions of the nature, sources, and rôle of profit. In a review of over thirty widely used texts, the writer found seven variants of the risk theory of profits, four variants of the managerial or entrepreneurial functional theories, and three varieties of descriptions of manipulative and exploitative sources of profit. Some texts presented no analytical discussion of the nature or sources of profit.

The continued disagreement among economists, accountants, and business men on the nature and rôle of profits, and the ambiguities in the use of the concept in economic analysis suggest the need for a restatement of the economic concept of profit.⁵

Knight's Theory of Profit

Under the postulates of productivity theory, the return to a factor of production is a function of its marginal value productivity. If each factor "gets what it produces," the total product is exhausted in the distributive shares in the form of wages and rent (interest). There is apparently no residual available for other forms of distributive shares. How, then, does profit arise?

The theory of profit set forth by Knight in *Risk, Uncertainty, and Profit* and adhered to by him with no major revisions in subsequent writings can be briefly summarized:⁶ The entrepreneur hires all of the (other) factors of production. The income of the entrepreneur is a residual after he has paid the contractual returns of wages, rent, and

⁴ Frank E. Norton, Jr., "Classified Bibliography of Articles on National Income and Distribution," *Readings in the Theory of Income Distribution*, *op. cit.*, pp. 704-9.

⁵ This analysis of the nature and sources of profit is not a theory of economic dynamics. It does not analyze the forces causing uncertainty which gives rise to profit. It is a clarification of terminology and of concepts. Its justification lies in the fact that in discussions of profit theory there is considerable terminological confusion resulting in incorrect theory and erroneous policy recommendations. Throughout the following discussion when the word "profit" is used, it should be understood in the sense of economic profit, a distinct type of distributive share. When the word is used, as many use it, with other meanings, it will be placed in quotation marks with the special meanings indicated.

⁶ F. H. Knight, *Risk, Uncertainty, and Profit* (Boston, Houghton, Mifflin Company, 1921). (London School of Economics, Reprints of Scarce Works, No. 16) pp. 264-312; also *idem*, "Profit," *Encyclopedia of the Social Sciences*, Vol. XII (New York, Macmillan Co., 1934); *idem*, "Profit and Entrepreneurial Functions," *Jour. Econ. Hist.*, Supplement (Dec., 1942), pp. 126-32.

interest. If the appropriate amount of wages, rent and interest is deducted from the income received by the entrepreneur for the use of labor, capital or capital funds which he himself has contributed, the remainder of the residual return to the entrepreneur would be (pure) profit or loss.

Assuming complete knowledge of all relevant economic circumstances and no uncertainties of the nature and behavior of future events, under perfect competition there would be no residual, *i.e.*, no profit. In such a situation, each factor would be paid its marginal value product (which would also equal the value of its marginal product). There would not, therefore, be a residue (nor would there be an entrepreneurial function to perform under such conditions).

Uncertainty is the chief barrier to perfect competition and the ultimate cause of profit, according to Knight. Ordinary risk is measurable. It can be expressed as a cost whose amount can be estimated with close accuracy. True *uncertainty*, however, is an unmeasurable risk. Either the time of its occurrence or its amount cannot be estimated with the reliability necessary to budget for it as an estimated cost. Thus the entrepreneur who operates a firm under conditions where his calculations must be based upon items which cannot be known with complete certainty, is likely to err in his valuations of the contributions of factors of production. If entrepreneurs as a group are over-pessimistic, they will underpay the factors of production and have profits. If entrepreneurs as a group are over-optimistic, they will overpay factors and have negative profits, *i.e.*, losses. The true cause of profits, therefore, according to Knight, is uncertainty, the presence of which results in realized events deviating from expected events.

Some emendations of Knight's theory are suggested to provide the basis for a more general uncertainty theory of profit.

Distinction between risk and uncertainty. The distinction between risk and uncertainty receives considerable emphasis by Knight. "Risk is measurable uncertainty."⁷ Risk is measurable when anticipations may be guided by statistical probability.⁸ Uncertainty is restricted to cases of the non-quantitative type.⁹ Unmeasurable uncertainty does not signify complete lack of knowledge, but lack of quantitative data or basis for "classifying instances."¹⁰

Many of the direct objections to the uncertainty theory of profit are based on the criticism that there is not a dichotomy between "risk" and "uncertainty," but a continuum of gradations varying with the amount

⁷ Knight, *Risk, Uncertainty, and Profit*, p. 20.

⁸ *Ibid.*, p. 225.

⁹ *Ibid.*, p. 20.

¹⁰ *Ibid.*, p. 225.

of information about the factors dealt with.¹¹ Knight, however, expresses full awareness of this fact; he exaggerated the distinctness of the two categories in order to emphasize the role of "uncertainty."¹²

Unfortunately, by clothing the terms "risk" and "uncertainty" with special meanings (which have now become standard usage in economics), misunderstandings and misinterpretations have resulted. In place of Knight's classification and definitions, the following is suggested. Uncertainty involves future events about which there is incomplete knowledge or whose probability of occurrence is not 1. Quantitative measures associated with uncertain future events are not single-valued. If the dispersion of the probability distribution of the likelihood of the future event is not zero, uncertainty exists.¹³ Individuals may hold single-valued expectations of future events for which several alternative actual values may be experienced. Uncertainty exists, therefore, even though expectations are single-valued.

The converse is somewhat paradoxical. Assume the probability of a given future event to be 1, but that single-valued expectations of the future are not held by individuals because they lack knowledge of the certain future value or occurrence. The definition of uncertainty, proposed above, encompasses this case by its reference to situations about which there is "incomplete knowledge."

Risk exists when uncertainty is associated with an undesirable event.¹⁴ The undesirable event may be defined in terms of departures in a specified direction from a norm. *Thus risk and uncertainty are not categories which differ in kind or degree. Risk is a subset of uncertainty.* No special term is generally used to describe the situation where uncertainty is associated with a desirable event. None appears necessary.

There are, of course, different degrees of uncertainty. The frequency distribution of probabilities associated with a future event may have small or great dispersion. In fact, some portions of the frequency distribution of probabilities may not be known.

Transformable versus measurable uncertainty. A further modification of Knight's terminology is suggested with reference to the basis for distinguishing uncertainty which gives rise to profit from uncertainty which does not give rise to profit. The criterion Knight uses is "measurability," having a basis for "classifying" cases. This conveys a somewhat inaccurate implication of the nature of the distinction, however. Measur-

¹¹ See for example, C. O. Hardy, *Risk and Risk-Bearing* (Chicago, University of Chicago Press, 1931), p. 64; W. T. Foster and W. Catchings, *Profits* (Boston, Houghton Mifflin Co., 1925), pp. 50-51.

¹² *Risk, Uncertainty, and Profit*, pp. 225-26.

¹³ Cf. J. Marschak, "Money and the Theory of Assets," *Econometrica*, Vol. VI, No. 4 (Oct., 1938), p. 324, footnote 11.

¹⁴ Hardy, *op. cit.*, p. 1.

ability is only one condition under which uncertainty can be reduced. Uncertainty may be reduced by customs, traditions, and conventions;¹⁵ costs may or may not be involved. Risks may be prevented or reduced by formal laws, regulations, association activity, traffic lights, lightning rods, fire-resistant materials, guards on machinery, etc. Risks may be eliminated or reduced by combination, compensation, research and forecasting, control, or by flexibility in the structure of operations. These devices ordinarily involve costs.

Insurance reduces risks through the operation of the "law of large numbers." Risk is not transferred to the insurance producer; it is substantially eliminated by the insurance process.

Other specialists and institutions provide facilities by which risks can be reduced: these are speculators, investors, subcontractors, investment bankers, and all types of organized markets—particularly the security and commodity exchanges.

The relevant distinction for profit theory is not between risk and uncertainty, but between transformable risks and non-transformable risks. The term, *transformable*, is preferred to the term, *transferable*, because the latter conveys the impression that risks are transferred to insurance producers or other institutions. The significant point is, however, that through the insurance process, through utilization of the services of specialists, and through the use of other institutions and devices, risks are reduced, eliminated or substantially eliminated, not simply transferred. The economic basis for these institutions rests upon their risk-reduction accomplishments.

If a "risk" is transformed or converted into a definite cost through some risk-administering device or institution, it has been eliminated and expectations with regard to the item may be represented by a probability distribution with a narrow range of dispersion. If a risk is not so converted, future events may deviate from planned events and thereby give rise to profit. Non-transformable or non-transformed uncertainty causes profit.

The profit component in non-contractual returns. The examples used by Knight to illustrate the "pure profit" component in the returns to "entrepreneurs" are conflicting.

It is useful, however, to distinguish between the return actually realized by an entrepreneur and the 'competitive' rate of interest on high-class 'gilt-edge' securities where the risk and responsibility factor are negligible. The difference would be profit, or 'pure-profit' in the sense in which economic theory uses the term.¹⁶

¹⁵ These "rules of the game" are informal controls transmitted through the social processes.

¹⁶ Knight, *Risk, Uncertainty, and Profit*, p. 304.

In this illustration Knight defines profit as the difference between the return realized and what is frequently called "the pure rate" of interest. But this *difference* includes two components: (1) a risk premium which is a factor cost differential and (2) an unanticipated residual. The "pure rate" plus the factor differential, represent what the return would have been if it had been fixed by contract in advance, assuming an unchanged order of income priority. The unanticipated residual is "true" profit.

In another example, Knight himself suggests this distinction

... profit in our sense of the term appears as a difference between the rate of return on the owner's investment and a competitive rate of return on investment generally.¹⁷

The "competitive rate of return on investment generally" does include, of course, risk or uncertainty differentials. If the return to the "entrepreneur" includes payment for labor services or for the use of owned land, competitive rates of wages and "rent" would have to be deducted also to arrive at the "pure" profit element in the "entrepreneur's" return.

Emphasis on the non-functional nature of profit. Implicit in Knight's discussion, but requiring additional emphasis is the recognition that profit is a non-functional component in the returns to factors. For each type of functional service there is a corresponding functional return—wages, rent or interest. The influence of the effects of uncertainty is, however, reflected in the deviation of actual events from expected events. Since contractual agreements are based on expected events, deviations from expected events give rise to differences which are absorbed by the income-receivers whose returns are non-contractual. Only these unexpected differential returns are not reflected in contractual payments. These differential returns are profit, according to Knight. The recipients do not receive the differential as a "reward" for the function of uncertainty-bearing. The differential (positive or negative) resulted because actual events differed from expected events.

Enterprise and profit. The substantial portion of *Risk, Uncertainty, and Profit* devoted to an analysis of the nature of "enterprise," is not needed in a presentation of Knight's theory of profit. Moreover, since Knight's theory regards profit as a non-functional component in the return to entrepreneurs, an exposition of the functional activities of entrepreneurship is not required for an understanding of the nature of profit. (His discussion of enterprise is relevant and important for an understanding of the nature of decision-making under conditions of uncertainty.) Therefore, the orientation and emphasis of his discussion of the nature of profit is altered and generalized as follows.

¹⁷ *Ibid.*, p. 309. On page 271 is a third definition of profit.

A Generalized Uncertainty Theory of Profit

Influence of uncertainty on types and forms of factor payments. Uncertainty results in the deviation of actual returns from expected returns. Payments to all types of participants in the production process cannot, therefore, be fixed per unit of time before the results of operation are available because revenues and costs are not then known. If, however, payments to some factors are fixed in advance, other factors receive residual returns which include unanticipated positive or negative components, economic profit.¹⁸ Profit is the difference between *ex ante* and *ex post* incomes.¹⁹

Contractual payments may be fixed per unit of time, per unit of the firm's output or sales, or a "piece-rate" based on output or on sales per worker. The residual income receiver bears more uncertainty than he otherwise would bear, when other factors are paid per unit of time, but continues to bear uncertainty when payments are "piece-rates" because the value at which final output is sold may vary. Further, if the firm is not operating under competitive conditions, the volume of sales and therefore the total return to the residual income receivers cannot be known in advance of the actual events.

Further, the time period must be specified. In time periods relevant for the continued existence of individuals and firms, the returns to some factors are not fixed if they can be temporarily or permanently separated from employment or if their rates of compensation can be adjusted in later contract periods. However, typically the establishment of a firm requires some commitments that are sunk costs. Further, even terminable costs are fixed for the period of employment or wage contract period if payment is not at least in part a function of "net income" or some other variable related to results of operations.

Whether the residual income receivers bear more risk than the factors which receive contractual returns is not possible of generalization. To make such a judgment would require an analysis of specific cases with reference to the terminability of costs, the effective mobility of factors receiving contractual returns, and the risk-reducing instruments available under the circumstances.

Confusion in this connection frequently arises because the non-fixed income receiver bears a type of risk that is different from other types of risks. The risk is that of an uncertain return for a given time period. But ordinary bond-holders may suffer variations in the market value of their investment and defaults of interest and principal. Workers may

¹⁸ Residuals need not, of course, always be unanticipated. Anticipated residuals are functional factor returns. Only unanticipated residuals are economic profit.

¹⁹ Cf. also M. J. Bowman, "Theories of Income Distribution: Where do we Stand," *Jour. Pol. Econ.*, Vol. LVI, No. 6 (Dec., 1948), pp. 536-37.

become unemployed. While the types of risks that are borne vary, risk-bearing is a widely diffused attribute. The differences between the types of risk have led some writers to exaggerate the importance of some risks and to underestimate that of others.²⁰

The non-contractual income receivers. Generally, the non-contractual income receivers are identified as entrepreneurs. The application of this term with its varied traditional connotations to a use in which functional activities perform no rôle, is likely to result in confusion. In view of the ambiguity of the term, it would be better if it were not used to describe various functional types of factors of production whose common attribute is the non-contractual nature of their returns.²¹ Hicks suggests the terms "hired" and "unhired" factors.²² The conciseness of the expressions and their freedom from ambiguous associations make it convenient to adopt these terms. Hired factors receive contractual returns;²³ unhired factors receive returns which are not specified in absolute amount before the results of operations are known, although the principles and procedures for calculating their returns may be explicit.

Knight's discussion of the returns to entrepreneurship is applicable to an explanation of the returns to unhired factors with little modification. As a first approximation, the return to unhired factors depends upon the relative demand for and supply of unhired factors. The demand for unhired factors depends in part upon the supply of factors seeking employment as hired factors. The supply of unhired factors depends upon anticipations of factors. If a factor owner prefers to employ his personal services or other economic resources at a return which is "residual," it is because he anticipates that under that form of contract his return will be higher than under alternative forms.²⁴

The returns to unhired factors depends on the value of their func-

²⁰ A clarification provided by analysis of income actually paid out is set forth by T. J. Kreps, "Dividends, Interest, Profits, Wages, 1923-35," *Quart. Jour. Econ.*, Vol. XLIX, No. 4 (Aug., 1935), pp. 561-99.

²¹ For a discussion of the nature of the entrepreneurial function, see the writer's "Enterprise and Profit," *Jour. Bus.*, Vol. XXII, No. 3 (July, 1949), pp. 141-59.

²² J. R. Hicks, *The Theory of Wages* (New York, Peter Smith, 1932), pp. 234-35. He refers to the unhired factor, however, as "acting as entrepreneur." Hicks, also, presents the phrase in quotation marks to indicate, it may be inferred, that he is simply following conventional oversimplification of a difficult conceptual problem.

²³ Although the returns to hired factors are contractual, they may still be contingent. For example, a commission of \$5.00 per item or eight per cent of dollar sales is a contractual rate, but the total income per time period is contingent on the volume of sales. However, the returns per unit of sales or dollar of sales for unhired factors cannot be specified beforehand because unit sales and unit costs cannot be known with certainty in advance.

²⁴ Cf. Knight, *Risk, Uncertainty, and Profit*, pp. 273-74. Knight also emphasizes differences in temperament or tastes as an important influence in the natural selection of entrepreneurs. *Ibid.*, pp. 269-70.

tional contributions and upon the influence of uncertainty.²⁵ The greater the uncertainty, the greater will be the variable element in those returns.

The foregoing explanation is, of course, an oversimplification of reality. The difference between unhired and hired factors is not simply a matter of differences in anticipations of future returns from enterprise. Historical distributions of owned resources, difference in "innate ability" (if this can be defined meaningfully), differences in experience—all undoubtedly influence the extent to which it is possible for a person to become a hirer of other factors of production or sources of factors of production. On the other hand, it may be that the importance of such barriers to mobility between the two economic classes described has typically been overemphasized.

The ultimate decision-makers in a firm need not be compensated as residual income receivers. The nature of uncertainty associated with many major business decisions makes it impossible to apply formal statistical procedures to express expectations toward future events in the form of a probability distribution with known parameters. Decision-making requires the exercise of judgment. Judgment may be judgment of men or formulation of policies. Judgment is an economic service. The principles explaining the compensation for this service are similar to the principles explaining the compensation of other services. The payment is a functional return. It may be fixed by contract or it may vary with the net results of operations.

Schumpeter defines profit as a gain from innovating activity—activity directed toward shifting the cost and sales curves.²⁶ This theory of profit is related to the uncertainty theory in that the innovating activity is both a product and source of uncertainty. However, the uncertainty theory of profit regards the income from the exercise of the innovating function as a wage or salary type of functional return. The temporary differential return secured by the successful innovator is a (Marshallian) quasi rent; permanent differentials are monopoly *revenues* or taken as capital gains.²⁷

The exercise of judgment may be sold on a fixed-price basis or on a variable-price basis. If it is sold on a variable-price basis, the entire re-

²⁵ See the next section for a discussion of this point.

²⁶ J. A. Schumpeter, *The Theory of Economic Development*, translated by Redvers Opie (Cambridge, Harvard University Press, 1934), esp. pp. 137, 148, 152-55. See also the clear statement by R. Triffin, *Monopolistic Competition and General Equilibrium Theory* (Cambridge, Harvard University Press, 1941), pp. 168-69.

²⁷ But cf., Schumpeter, *op. cit.*, pp. 33-34; for his definition of monopoly revenues see his p. 152. A capital gain is the recognition of a change in the anticipated value of a future stream of earnings, either because of modification of the discount factor or changed expectations toward the future stream of earnings; income in this context is not differentiated as to the type of distributive share it represents.

turn is not "profit." Theoretically, profit in this situation is the difference between what the factor would have received if its return had been fixed, and what it actually received as a variable-return.

In a practical situation it is frequently difficult to distinguish between ability (or lack of ability) or luck (good or bad), as the source of the differential. This does not deny the importance of judgment in the formulation of business decisions and in the selection of functionaries and areas of activity, but it does indicate the difficulty of rationalizing empirical findings.

The nature of profit under uncertainty. Uncertainty arises from unpredictable changes in demand and supply functions.²⁸ By definition, the unpredictable changes can not be successfully forecast. If decision-makers do not attempt to forecast the unpredictable changes and if the unpredictable changes are random in origin and effects, profits in the aggregate over a long period of time will be zero because positive profits and negative profits (losses) will cancel each other.

Decision-makers, however, may attempt to predict the unpredictable. This signifies that from experience they know that demand and supply functions will shift during the contract period or production period, but they lack complete knowledge of the direction or of the magnitude of the shifts. They may make plans on the basis of an expected shift of an estimated direction and magnitude. If a "mixed" or "statistical" strategy²⁹ can be used to formulate the expected direction and magnitude of shifts, aggregate profits will again be zero. If the use of such a strategy is not possible, and it is not likely to be because of lack of knowledge of the probability distributions of the possible shifts, aggregate profits will be positive, negative or zero, depending upon the patterns of expectations formulated in attempting to forecast the unpredictable shifts in demand and supply which take place. If attempts to forecast the unpredictable are on the average (weighted by values) wrong, unhired factors will on the average pay hired factors "too much" or "too little." These are associated with negative profits or positive profits, respectively, to the unhired factors. If forecasts are (by chance) correct, and hired factors are paid on that basis, profit will be zero.

Knight has suggested that over-optimism of the decision-makers results in the factors being paid "too much."³⁰ Over-pessimism would presumably cause the decision-makers to pay the factors "too little." However, qualifications of this generalization are required. For example, too much "over-pessimism" would stifle activity by unhired factors. In view

²⁸ Cf. H. Working, "The Investigation of Economic Expectations," *Am. Econ. Rev.*, Proceedings, Vol. XXXIX, No. 3 (May, 1949), p. 159.

²⁹ J. Von Neumann and O. Morgenstern, *Theory of Games and Economic Behavior* (Princeton, Princeton University Press, 1947), p. 144.

³⁰ Knight, *Risk, Uncertainty, and Profit*, p. 285.

of the ambiguity of the expressions, optimism and pessimism, and because of the difficulty of distinguishing these attitudes from the subjective reactions referred to as risk-aversion and risk-preference, the source of positive or negative profits in the aggregate may best be explained by errors of prediction, one of the causes of which may be over-optimism or over-pessimism.

Errors of prediction should and can be distinguished conceptually from risk-aversion and risk-preference. Returns to those who have uncertainty-aversion will probably contain a nominal risk premium. Returns to those with uncertainty-preference will probably contain a nominal risk discount. These premiums or discounts, however, are not profit, but a component of the wage, interest or rent returns to the respective types of productive factors. There is a significant difference between the nature of the influence of errors of prediction and the nature of the influence of risk-aversion or risk-preference. The errors of prediction of decision-makers result in erroneous judgments of the shape and position of demand and supply curves. Actual demand and supply functions will differ from expected demand and supply functions. Expectations will, of course, themselves influence demand and supply functions to some extent, but anticipations will not always create realizations in their exact image. For example, to expect machinery to have a specified low rate of repair expense may not provide certainty of the realization of that specific low rate of repair expense. Risk-aversion and risk-preference, in contrast, themselves alter the nature of demand and supply conditions. These changed demand and supply functions result in changed factor returns.

In contrast to the possibility of zero profits in the aggregate, the profit experience of the individual firm is not likely to thus reflect the operation of the "law of large numbers." Hence, even if the decision-makers of the individual firm made no attempt to forecast unpredictable changes, it is likely that the firm will experience profits, positive or negative. Whether profits are positive or negative for the firm when decision-makers ignore unpredictable changes, depends upon the impact of those changes on the firm. If the decision-makers attempt to forecast unpredictable changes, errors will result in profits or losses depending upon the nature of the errors. The risk-preference or -aversion of individual productive factors will have negligible influence upon their functional factor returns since under the competitive conditions assumed throughout this discussion, an individual factor will have negligible influence on the demand and supply conditions.

The profit component in factor returns. Whether profit elements exist in the returns to residual income receivers only or in all factor returns depends upon the assumptions made with reference to the time period

of analysis. If the existence of a structure of competitive factor prices is assumed, the residual income receivers of firms in industries in which results of operations are more favorable than anticipated secure returns containing a positive differential (and conversely). The difference between *ex ante* returns and *ex post* returns is economic profit. This is the short-period analysis.

If the horizon of the time period is extended, however, so that expectations could be revised and resources could be shifted between firms and industries as a consequence of changed expectations, the competitively-established prices would be changed. Economic profit would then be defined in terms of potential shifts of these types. Under these assumptions, economic profit is the difference between the factor payments actually received and the payments that would have been received if there had been complete knowledge of all events as they worked themselves out. In this framework, it is likely that every type of factor return would contain an element of profit. This view has also been suggested by Knight.

It is evident that in this highly theoretical sense every income, with accidental exceptions, contains an element of profit. This element may be positive or negative in any case. In no case is it possible to determine objectively and accurately the amount of profit element in an income, since this would involve an accurate determination of every detail of the position of equilibrium corresponding to the given conditions of the society at the given moment.³¹

The profit element in the returns to each type of factor would be the difference between what each actually received and what each would have received if the entire structure of production had been instantly revisable to that which would have existed with complete knowledge and the returns to each type of factor equalled its marginal value product.

Since change is itself a breeder of uncertainty, it would be extremely difficult to utilize this second concept of profit. The subsequent analysis will in consequence refer to profit as the difference between *ex ante* and *ex post* returns in "the short period."

The concept of "normal profit." The preceding discussion provides a basis for analysis of the concept "normal profit." In long-run competitive industry equilibrium, each firm in an industry operates at the minimum point of its long-run average cost curve, and average cost is equal to the market price of the product. Under these conditions, it is usually stated that the average cost curve includes "normal profit." This is an ambiguous statement with erroneous implications. The indiscriminate use of this concept has resulted from the uncritical extension of Marshall's definition of "normal profit" as a conglomerate of "normal earn-

³¹ Knight, "Profit," *op. cit.*, p. 482.

ings of management," "normal profits of capital," both including "risk as an element of profits and costs."³²

If it is agreed that profit is a deviation of actual returns from expected returns and if such deviations are random, there is "no normal profit."³³ In the long run, profit may be positive, negative or zero, as explained above. But profit is not an element of cost; it is an unanticipated residual.

A correct formulation of the meaning to be conveyed when the concept "average cost including normal profit" is ordinarily used is: The average cost curve includes all types of functional distributive shares and appropriate uncertainty (risk) differentials (positive or negative) for all factors. The "normal cost" elements do not include the entire *nominal* risk differentials, but would include only the effective net risk differentials. For example, a nominal differential between Aaa and Caa bonds might be 2 per cent; after adjustments for defaults of interest and principal, the effective net risk differential might be zero or negligibly positive, or negative.

Profit in the Theory of the Firm

Short-period equilibrium. The foregoing abstractions may be illumined by their application to the theory of the firm.

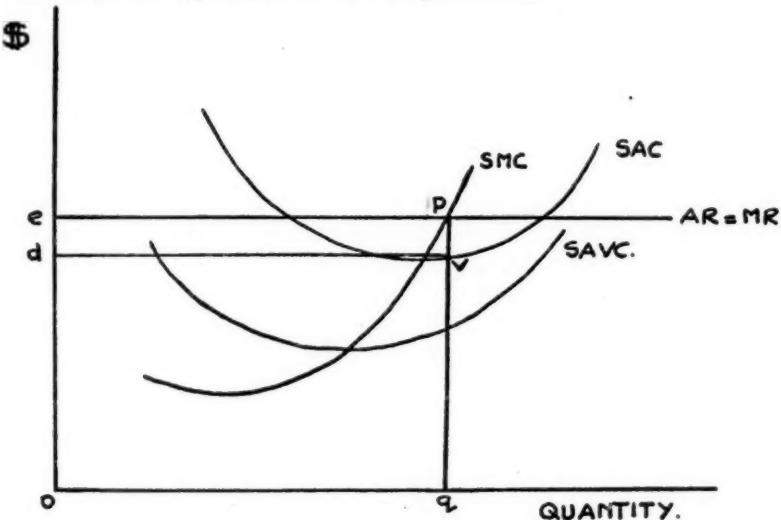


FIGURE 1

³² A. Marshall, *Principles of Economics* (London, Macmillan and Co., Ltd., 1920), 8th ed., Book VI, Chapters VII, VIII, *passim*.

³³ Cf.: "There is no normal profit, since *ex-hypothesi* profit is the incalculable deviation of the actual from the anticipated." M. Dobb, "Entrepreneur," *Encyclopedia of the Social Sciences*, Vol. V, p. 559.

Figure 1 portrays the conventional illustration of a firm earning profit, $pedv$, in short-run equilibrium, but in long-run industry disequilibrium. Actually, $pedv$ is not profit. It is an anticipated factor return which motivates the decision-makers of the firm to carry on productive operations in the industry of which this firm is a member. It illustrates Marshall's concept of quasi-rent. Marshall used quasi-rent to refer to a return that was temporarily in excess of the "normal return" to a factor.³⁴ Marshall assumed that after all the equilibrating adjustments had been made, there would no longer be any differential above the (possibly higher or lower) new normal return. Any permanent efficiency differentials between factors, however, represented a true (Ricardian) "rent."

Profit could be shown only by presenting two sets of curves for either the cost curves or revenue curves (or both, of course), as in Figure 2 for revenue curves. Both the *ex ante* and *ex post* curves must be shown since profit results from and is portrayed by differences between these sets of curves.

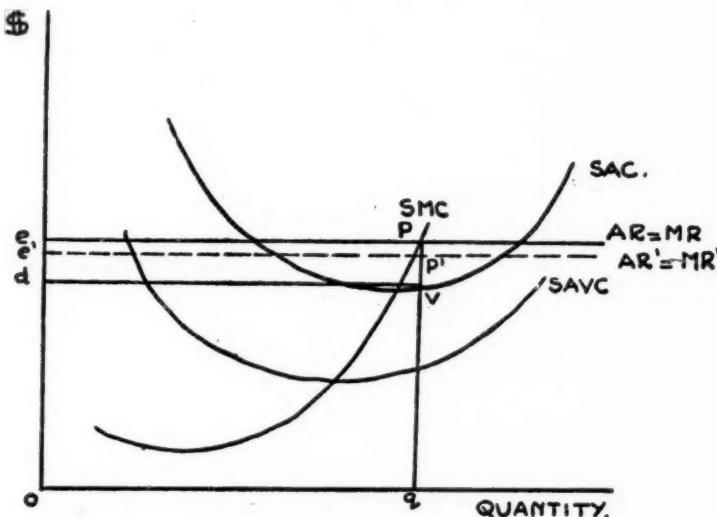


FIGURE 2

In Figure 2, the firm produced oq expecting to sell oq at a price of qp . However, the actual market price was qp' . The return to the residual income receivers would have been their opportunity costs, included in the AC curve, plus $pedv$. As a consequence of the erroneous estimate of the market price, the return to the residual income receivers was only their opportunity costs plus $p'e'dv$. There is negative economic profit of

³⁴ Marshall, *op. cit.*, pp. 420-26, 577-79, 622-28, especially p. 626.

pee'p', representing the difference between the anticipated return and the actual return to the residual factors. Cost curves also may change their positions or shapes because of changes in the production functions of supply conditions of factors.³⁵ These new changes could also be used to illustrate economic profit.

This interpretation is so contrary to the conventional presentation that it was long resisted, while many attempts were made to formulate the uncertainty theory of profit consistently with traditional representations of elementary economics. However, the major objective of business operations is not simply to "maximize profit" on the basis of knowledge of functions or curves of the type portrayed in Figure 1. The objective of decision-makers of the firm is to achieve *situations* where the revenue-cost relationships for the firm are such that maximum net revenue returns may be achieved. Moreover, it should be perfectly clear that, to the extent that only pecuniary motives are considered, other factor sellers have similar objectives.

What requires considerable emphasis is that if a diagram such as Figure 1 can be drawn, the major business problems have been abstracted from. Given the knowledge portrayed by the functions in Figure 1, elementary geometry or elementary calculus is sufficient to provide the "maximizing" solution. *To attribute a central rôle to profit maximization in static, equilibrium analysis must lead to confusion because static analysis abstracts from the very conditions which give rise to economic profit.* Profit is, therefore, a concept which must be analyzed in a framework of dynamic analysis.

These observations are not intended to minimize the usefulness of the diagram of Figure 1 as a first-approximation model. With this model many useful generalizations on resource allocation and income distribution may be developed. But many more "approximations" are required before a meaningful model which depicts the major aspects of the behavior of decision-makers of a firm is reached.

Critics of the central doctrine of this section are divided in their viewpoints. One group urges that the situation presented by Figure 1 can exist only because the price-cost relationship was not sufficiently widely anticipated. Otherwise, investment would have flowed to this industry, causing the elimination of the differential return. Hence, it is urged, area *pedv* is an unanticipated return and therefore profit.

* For a limited category of cases it may be said that the difference between the *ex ante* and *ex post* returns of the residual income receivers is associated with an equal, but opposite in sign, difference between the payments received by contractual income receivers and their marginal value product, or what they would have received after the results of operations were known if payments to these factors were based not on rates set by the competitive market structure, but on the basis of a productivity analysis in their specific use. Some specialization in the factors would be required for this situation to be operative.

However, area $pedv$ does not exist in the expected sales and cost curves of some other decision-makers; it may be negative in the planning data of the other calculators. Or it may represent insufficient motivation to some for investment in this field. The less informed or less optimistic anticipations of other decision-makers represent *one* of the conditions making the situation represented by Figure 1 plausible to some decision-makers. However, when the expectations of the latter decision-makers have been represented in a diagram with a positive (or zero, since zero profit is associated with "normal" functional factor returns) area $pedv$, the area $pedv$ is an expected differential functional factor return which motivates the decision-makers who hold expectations of this kind.

The other view is that when "profit" is used, usually "net receipts" is the category referred to. Further, when the concept "profit maximization" is used, "profit" is used synonymously with "net receipts." Surely, it is not conducive to clear analysis to use one term when another is intended. Much of the confusion surrounding the concept profit arises because many who use the term do not indicate and perhaps are not aware of which of its several meanings is appropriate in specific situations. The area $pedv$ in Figure 1 does represent anticipated net receipts. If this term were consistently used where appropriate and the word profit avoided where inappropriate, much ambiguity in economic discussions could be avoided.

Intra-marginal firms. Another example of incorrect use of profit is the case under perfect competition in which some "firms" in a given industry are more "efficient" so that the average costs curves at the point of operations of these firms is lower than the average costs at the point of operations of "marginal" firms. The differentially higher net receipts of the intra-marginal firms is usually called "profit." The intra-marginal firms may have advantages such as newer equipment, more favorable location, more favorable trade relations, or better organization of the factors of production (*i.e.*, greater "efficiency"). However, these advantages represent functional services with differential marginal value productivity, and under the postulates of productivity principles, the more productive factors would receive commensurately higher returns. Permanent efficiency differentials result in permanent differential returns in accordance with the postulates of productivity principles. Such differential returns are not profit, but differential payments for differential value services.

Monopoly and profit. Another source of "profit" which is frequently cited is "monopoly." Monopoly exists if price exceeds marginal cost. However, even if the degree of monopoly is greater than zero, monopoly "profit" may not exist. Given that price exceeds marginal cost, the dif-

ference between price and average cost is a measure of monopoly "profit." Monopoly income is generally referred to as monopoly "profit" and monopolistic advantage is ordinarily referred to as an important source of large "profits."

This is, however, a misuse of terms. The differential return to the monopolist is usually a differential wage, interest or rent return depending upon the means by which the monopolistic advantage was fashioned. The monopolist return is compensation for the performance of a function (albeit perhaps an undesirable one for the public welfare).

Admittedly, the monopolistic position may be wholly or in part the result of the occurrence of an unanticipated set of events. In these cases, the difference between *ex ante* and *ex post* incomes for the given planning period is, of course, profit. But for subsequent planning periods, the differential returns are capitalizable and are no longer profit.³⁶

Need for a Clear Theoretical Concept of Profit

Economic profit is a non-functional element in factor returns. It is the difference between *ex ante* and *ex post* returns. The significance of a category apparently so sterile in content is that sound theoretical bases for distinguishing between wage, interest, rent, and profit components in the incomes of buyers and sellers of economic services exist. The term profit is necessary to explain a type of return which is not described by other categories. In addition, it contributes to a clear conceptual framework for analysis which is necessary to continued progress toward the understanding and solution of basic economic problems.

Evidence of confusion because of the lack of a clear theoretical formulation of basic income categories may be found in the many charges and counter-charges with regard to the nature, rôle, and economic significance of corporate "net" income. Corporate "net" income is frequently referred to in popular and "scientific" discussions as "corporate profit."

The nature of accounting practices makes it difficult indeed to generalize accurately on the economic content of business or corporate "net income." Dominant accounting tradition has a predilection for the use of historical costs rather than current (relevant) costs. Accountants do not, in general, attempt to "impute" costs. There is not consistent accounting treatment in the annual income statement of (1) capital gains and losses, (2) "unusual" items, and (3) amortization of goodwill. The difficulty is further compounded by the frequent uncertain orientation

³⁶ Cf. Schumpeter, *op. cit.*, p. 152; Hardy, *op. cit.*, p. 39, n. 1. This is true of the functional differential monopoly returns also. After capitalization, returns are "normal" returns. For example, the nominal yield on outstanding securities of a monopolistic company is typically lower than the nominal yield on the securities of a firm in a competitive industry.

of the income statement, a vacillation between the proprietorship theory and the entity theory.

In periods of considerable changes in the general price level, use of historical costs instead of current costs may lead to the inclusion of a considerable element of capital accumulation or depletion in the accounting "net income" figure. In a period of substantial technological changes, similar consequences may follow.

Abstracting from these two kinds of major influences, the types of economic elements which will be found in accounting "net income" depend upon the size, ownership pattern, and compensation arrangements of the firm. In large firms with widely diffused ownership, the returns to common stockholders represent mainly an interest return on funds invested. In small firms, where capital contributors may also provide personal services to the firm, the income "available" to owners represents mainly interest and wages, with probable arbitrary shifts between categories. If the "firm owns" capital goods, the income "available" to owners may include a "rent" or "quasi-rent" as well as interest or wages. All of the returns may be joined with elements of "pure profit." Therefore, to study corporate net incomes in an attempt to formulate generalizations on economic profit must lead to confusion.³⁷ Similarly, profit theory can provide little guidance on "problems" of whether corporate "profits" are too high or too low. Such problems, to the extent that they can be formulated meaningfully, are more relevant to income theory and to employment theory (related to interest and wage theory) than to profit theory as such.

The Rôle of Profit in a Price Economy

Further evidence of the need for clear understanding of the conceptual nature of economic profit exists in the unprecise and misleading statements which are found in many textbook generalizations on the rôle of (economic, presumably) profit. Texts in economics commonly emphasize that one of the most important functions of profit relates to the rôle it performs in guiding new investment. The usual description runs in the following familiar terms. When "profits" are above "normal" in a particular industry, new investment flows into that industry until "profits" are no longer above "normal." When "profits" are below "normal" in a given industry, new investment will not flow to this industry and disinvestment will take place either by shifting investments to the extent that technological circumstances make this possible, or as present equipment wears out it is not replaced. Disinvestment proceeds until the rate of "profits" is no longer "subnormal."

³⁷ The influence of economic profit may be found in the analysis of the use of budgets in business planning.

It is apparent that "profits" in such contexts is not used in the sense of an internally consistent definition of economic profit. The return described is the payment for the use of a capital good or capital funds. If it is the payment for the use of a capital good, it may be called the "rent" of the capital good. If it is the payment for the use of a capital fund, it is interest. Economic profit results from errors of prediction. Hence there can be no tendency toward a "normal" as described above.

In the case of profit arising from a temporary disequilibrium under perfect competition (as portrayed by Figure 2), profit may or may not attract new investment depending upon whether the profit is considered to be permanent or temporary. If the differential return may be capitalized, it is no longer "profit," since it is no longer an uncertain (or unanticipated) differential.

But even if a functional definition of "profit" were adopted, the generalization that the characteristic which distinguishes profit from other distributive shares is the function it performs in guiding investment is incomplete. To the extent that "profit" provides a return which represents the payment for carrying out an economic function, it guides the flow of the services compensated by the "profit" share. However, this is not a rôle distinctive of the distributive share "profit," since payments to all types of factors perform an allocative function.

It is valid to observe that new investment flows to those industries where it receives the highest return. But it is not correct to designate this return economic profit. Further, wage differentials will attract additional workers to the industry which offers "higher" wages; workers will separate themselves from industries which pay "lower" wages.³⁸ Capital goods including land will be sold or leased where they receive the highest price or "rent." Funds will be loaned where anticipated yields are greatest. The conclusion must therefore be that economic profit has no unique, if any, allocative function. Differential payments guide resources of all kinds to the use where the highest return is received.

The statement frequently made that the efficiency of the management of a firm can be measured by the profit record of the firm is subject to two interpretations. If these statements refer to the efficiency of hired managers of the firms, their validity is questionable. Under the postulates of productivity principles, more efficient managers have higher productivity and would, therefore, receive higher salaries. If the management of each firm and all the associated productive factors were paid in accordance to their contribution to value product, the net income of a firm with highly efficient management would be about the same as that of any other firm whose situation is "identical" except for less efficient

³⁸ Other conditions of the job are held constant.

management. One could reason with greater cogency that management competence might be measured by the size of management's compensation.

Frictions of all types might, of course, in practice prevent the complete expression of the theoretical model. In particular, there might exist a wide range of indeterminateness in the salary of managers since the difference between their value in their specific employment and their value in alternative companies might be considerable. However, if the theoretical generalizations were not realized because of the practical influences cited, net incomes of firms (what is loosely called "profits") would reflect, not relative efficiencies of managements, but accidents of market imperfections and indivisibilities.

The alternative interpretation of the generalization that profits measure the performance of a firm is that profits reflect the ability of entrepreneurs to create or to select productive opportunities. Given the nature of the information conveyed by accounting reports, the adherents to this interpretation face a most difficult problem of pointing to empirical data on "entrepreneurial profits" by which entrepreneurial performance is judged.

The important consideration is that, regardless of the type of contractual arrangement, the motivating factor in the situation is the anticipated return. The incentive which motivates the residual income receiver (sometimes called entrepreneur) is fundamentally not different from the incentive which motivates the other factors in the production process.

The foregoing discussion of the usual generalizations on the function of profits indicates that they are too narrow and restricted in scope. It suggests the principles of the functions of resource payments in a price economy, frequently and erroneously described as the peculiar and unique rôle of profits.³⁹

1. Resource payments provide a measure of relative values of economic resources. The body of doctrine which presents the principles and concepts upon the basis of which these relative values are determined is known as value theory.
2. The relative values provide a guide to resource buyers to economize on scarce or high value resources and to use more freely abundant or low value resources.
3. The relative values provide resource sellers with the incentive to seek the best, most remunerative, uses of their services.

In accordance with the three principles enumerated, resources flow to

³⁹ These were presented by M. Friedman in classroom lectures.

uses where they secure the highest returns.⁴⁰ Differential returns attract factors of all types to their best and highest uses. It is not the unique rôle of "profits" that they attract new investment or provide unique incentives to entrepreneurs.

The concept of the "profit motive" is a special case of a broader generalization. The "profit motive" is not the major source of economic incentives in a price economy. The payments anticipated by factors of all types motivate economic activity. This is to say that in a price economy, relative prices perform the function of providing incentives and of allocating resources.⁴¹ If it is suggested that this is "really what is meant by the expression 'profit motive,'" it must be pointed out that the word "profit" is not thus used in a scientific sense, but in a general way to suggest a meaning which is best conveyed by other terms free from the many stereotypes associated with "profit."

It is unfortunate that in both "scientific" and popular usage, the essential nature of a price economy is obscured by attributing to "profits" characteristics which are not at all peculiar to that form of distributive share. Such misconceptions result in a misunderstanding of the nature of an economic system organized on the basis of the price system and lead to unsound policy proposals.

Thus a contribution of the uncertainty theory of profit is that it emphasizes the necessity for consistent use of terms in economic analysis and thereby leads to clearer understanding of the nature and rôle of functional income shares. A further significance of profit as defined here lies in its re-emphasis on the need for analysis of the nature of business decision-making under uncertainty.

⁴⁰ The omission of discussion of principles of income and employment determination, and the omission of consideration of the inter-relationships between allocative, distributive problems and problems of employment, income and output levels should not be interpreted as lack of recognition of their considerable importance.

⁴¹ This discussion is not intended to minimize the importance of the rôle of non-financial motives and incentives on economic activity.

GOVERNMENT GUARANTEES AND PRIVATE FOREIGN INVESTMENT

By YUAN-LI WU*

I. *Introduction*

Recent discussions in connection with President Truman's Point IV program have made it abundantly clear that the general attitude of the United States towards the utilization of American capital in furthering the economic development of under-developed countries, apart from the question of technical assistance in the narrower sense, is based on the following convictions; namely, (1) that private enterprise and private funds should play the major rôle in foreign investment, (2) that public funds controlled by the government, outside the sphere of emergency measures for a transitional period only, should not enter into "direct and wasteful competition with private funds,"¹ and (3) that government guarantees should be given to private investors in order to eliminate the risks peculiar to investment activities overseas.² Since the views of the United States in this field are of vital importance both to the investors and to the under-developed countries, an examination of some of the implications of these conceptions would appear to be timely, as well as advantageous. Of particular interest is the question of government guarantees for the encouragement of private foreign investment.

II. *The Risks of Inconvertibility and Expropriation*

It appears that two types of risks are paramount in the mind of those advocating government guarantees. Assuming that an investment in a foreign country is profitable, it is pointed out that the investors may nevertheless derive little benefit or even suffer a loss if (1) the profit earned cannot be turned into the currency of the investor's own country—which, for all practical purposes, is the United States dollar—if and when the transfer is desired, and/or (2) if the foreign government ex-

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¹ Secretary of State Dean Acheson's speech on September 19, 1949, before the Pan American Society.

² At the time of writing (September, 1949), a bill authorizing the Export-Import Bank of Washington to undertake guarantees of convertibility and freedom from expropriation for private foreign investments has been introduced in Congress.

propriates either a part or the whole of the profit or principal of the investment in question. In short, the two major types of risk envisaged are inconvertibility and expropriation.

No one would deny that if the risks of inconvertibility and expropriation were absent, the atmosphere would be far more congenial to private foreign investment than it is now. The question is simply whether these risks can best be removed by government guarantees and whether the conditions of effective guarantees would not give rise to certain other developments that would tend to nullify whatever advantages government guarantees may have in the first place.

Assuming that guarantees, once given, would be upheld, their effectiveness as a means of encouraging private foreign investment must *in the ultimate analysis* depend upon the willingness and ability of the "borrowing" or "capital-receiving" country to honour them, because the responsibility of maintaining convertibility and freedom from expropriation must finally devolve upon the latter.³ In other words, even if a guarantee were, in the first instance, given by the investors' own government, or one of its agencies, the government of the "capital-receiving" country would have to be bound in some manner, such as through the conclusion of a special bilateral economic treaty, so that it would be held responsible for the maintenance of the guarantee or for taking all the measures necessary and sufficient for the purpose. For the "lending" or "capital-exporting" country, if it be the initial guarantor, could not conceivably refrain from exerting pressure on the "capital receiving" country so that the latter would take all the measures necessary in order to uphold the guarantees, even in the absence of a formal bilateral treaty to this effect, if conditions in the latter were such as to cast doubt on the country's ability and/or willingness to maintain convertibility and/or freedom from expropriation.⁴ This particular relationship between the two countries means that while the "capital-receiving" country is *ex hypothesi* anxious to attract foreign capital, it must, nevertheless,

³ Inconvertibility and expropriation are, as we shall see, such complex and elusive concepts that they cannot be easily determined. In so far as they can be defined, however, the risks involved are incalculable. These risks cannot be pooled by individual firms, because when they occur, they tend to affect all foreign investors in any particular country simultaneously. This is true especially with respect to inconvertibility. Nor can these risks be spread among investors whose investments are situated in different foreign countries, because at any moment of time the investors eligible to the benefit of the guarantee system may be concentrated in a single country or group of countries which are subject to the same influence so far as convertibility and expropriation are concerned. This is why it is impossible to insure against these risks in the ordinary sense of insurance. Once guarantees against these risks are given, the guarantor, whether it be the "lending" country or the "borrowing" country, has, therefore, to concentrate entirely on preventing the occurrence of the particular circumstances rather than relying upon the pooling of risks through the law of averages.

⁴ See also Section V below.

less, consider the implications of the guarantees which it will *in fact*, *even if not in name*, be called upon to give. It must see clearly the conditions under which these guarantees may be safely given and the measures it will be required to take, against which the advantage of a larger supply of capital must be weighed, no matter whether it acts as the initial guarantor or not.

III. *The Incidence of the Convertibility Guarantee*

Convertibility is not a simple concept in practice. Let us assume that we are dealing with two countries, A and B, country A being the investor country, country B being the "capital-receiving" and under-developed country. When we speak of a government guarantee of convertibility of currency B into currency A, we must first of all specify whether we refer to general free convertibility between the two currencies or only to the partial or specific convertibility from currency B to currency A of certain categories of incomes or capital transfers connected with certain investments of country A in country B. The question of guaranteeing general convertibility would seem hardly likely to arise unless at the time it is considered, an initial state of general convertibility exists. On the other hand, if at the time A and B discuss the possibility of an agreement in connection with guarantees of convertibility there is no general convertibility between the two currencies, the question must chiefly concern the convertibility of specific types of funds. In practice, while general convertibility will no doubt be cited in all such agreements between A and B as a long-term aim, the immediate object of the guarantee will in all probability concern specific investment activities only. In other words, the most important case we have to consider may be described as follows: (1) There is no initial general convertibility from currency B into currency A. (2) Subsequent to an agreement between A and B, certain categories of funds in currency B due to inhabitants in A as a result of the latter's investment activities may now be freely converted into currency A.

Even a cursory examination of the case as stated above would raise a number of thorny problems. First, should investments made prior to the guarantee agreement be included under the guarantee? There is apparently no reason why investors who have braved the risk of inconvertibility without the benefit of a government guarantee should be penalized now that this guarantee is available to new investors. But for a country which has already large investment interests owned by foreigners within its territory and which may, therefore, have large sums of blocked funds due to the latter, to extend the guarantee of convertibility to the old investors might produce an immediate rush of outward transfers in such proportions as to threaten the stability of its currency. Secondly, should

convertibility be extended to transfers of funds arising out of interests acquired without an initial outlay in the investor's own currency? To do so might open the way to persons other than the foreign investors to avail themselves of the benefit of convertibility which is expressly not meant for them. On the other hand, to restrict convertibility to investments made with an initial outlay of foreign currency would discourage the reinvestment of profits which are in the currency of the "capital-receiving" country. Thirdly, should convertibility apply also to the withdrawal of investments as distinct from the gradual amortization of capital and repayment of loans, in cases where such withdrawal is possible and desired? For instance, can a foreign investor sell out his business, assuming that he can find a buyer, and repatriate his capital at any time? The freedom to invest would seem to imply the freedom to disinvest. Yet to permit unrestricted repatriation of capital might again endanger the stability of the currency of the "capital-receiving" country through the miscalculation or recklessness of certain foreign investors. Fourthly, while in the case of fixed-interest payments on loans, the amount involved in the transfer is known, dividend payments depend not only upon the actual amount of profit made within a given period of time, but also upon the dividend policy followed by the individual firms. Should the guarantee be given without any condition being imposed on the latter and irrespective of the general state of trade?

The above points relate to the categories of funds to which guaranteed convertibility should apply, or in other words, the scope of the guarantee. An equally important point is the rate of exchange at which convertibility, once the scope of its application is determined, is to be maintained. For, obviously, investors from country A would like to be able not only to convert any given sum due to them from currency B to currency A, but also to do so at a stable rate of exchange. If currency B is devalued in terms of currency A, profits expressed in the latter would be correspondingly reduced. On the other hand, the burden of interests on loans fixed in currency A would be increased in terms of currency B, and the danger of default might arise.

That the difficulties presented by the problems we have just mentioned cannot be easily solved is fairly obvious. Yet their satisfactory solution is absolutely essential to the application of the principle of convertibility guarantee. So long as our aim is to offer the potential investors the greatest possible inducement, the tendency would be to expand the categories of funds to which the convertibility guarantee would apply to as many as possible so as to include every conceivable type of transfer which both old and new investors may wish to be free to make, and, at the same time, to render as difficult as possible any unilateral change in the rate of exchange in question. This

determination of the scope of the convertibility guarantee and the pegging of the exchange rate between currencies A and B will in turn determine what may be called "the burden of convertibility" for country B. In other words, given these factors, at a certain rate of capital inflow from A to B, the latter must dispose of a definite surplus of currency A, let us say, annually, over and above the amount it usually earns in order to maintain the specific convertibility.

In order to facilitate our analysis, we shall now further assume that in addition to countries A and B, we also have country C, which is in exactly the same position as B, and which, for convenience's sake, may be regarded as the rest of the world. The problem now confronting B is not just the familiar transfer problem, because B must not only create an export surplus, but it must be a specific export surplus in relation to country A. To have an export surplus in relation to C would be of no use as, *ex hypothesi*, currency C cannot be freely converted into currency A. Furthermore, the size of the surplus in currency A required for the maintenance of specific convertibility at a fixed rate of exchange cannot be pre-determined by B's authorities, because, among other things, it depends upon the state of business, the dividend policy, etc., of the foreign investors, and the rate of further investment from country A.

Since investors in country A will presumably require a little time to observe the effectiveness of the convertibility guarantee system at work before making further commitments, we are deprived of the most convenient way out of the impasse, *i.e.*, the assumption of a steadily increasing inflow of capital from A to B. We have now to see what steps both A and B must take in order to insure the success of the guarantee system.

First, B must now step up the absolute volume of its export to A by diverting its resources from other purposes to the production of exportable goods which A is prepared to buy and to the production of substitutes for goods ordinarily imported from A.

Secondly, B must now export more to A than to C, and import more from C than from A. Unfortunately, this re-direction of trade may not be possible, because (1) C may try to do the same thing simultaneously, and (2) A will probably object to any restriction on, or discrimination against, the import of its products into B on current account.

Thirdly, as B cannot take any open measures to restrict or discriminate against imports from A, it must rely all the more upon restrictive measures directed against the propensity to import in general through consumption controls, etc. Since there is an induced demand for imports from A as a result of the new investment activities, the need for such restrictions is considerably enhanced.

Fourthly, B must now refuse to give its convertibility guarantee to any foreign investor from A unless the investment in question will contribute immediately to an expansion of its exports to A or a replacement of its imports from A. Any other type of investment from A would merely increase the burden of convertibility.

The sum total of the above measures would tend to make the economy of country B one in which the government would have to play an increasing rôle in the control of consumption and, if possible, imports, and in the selection of new investments, together with all the paraphernalia of controls and priorities, which will have as their paramount aim the gearing of the country's productive efforts to meet the possible capricious demand of buyers in country A. If only a small number of export industries can be developed, the desirable effects of diversification and a more balanced development would have to be sacrificed. The extreme case would be afforded by a country which can only develop a single product for its export trade. And if the exports which A is ready to purchase consist of primary products only, the violent price fluctuations to which these commodities are often liable would add further to B's economic woes. Besides, as B must sell its products to A, the latter would be in a position to exact more favorable terms of trade for itself. In fact, all this would appear to be rather reminiscent of the conditions which German economic policy tried to foster in southeastern Europe before the last war. The total volume of B's foreign trade, especially that part with C, would probably decrease. Instead of opening its door wide to all foreign investors, B would have to resort to discrimination and concentrate on the development of industries which would increase its exports to A, either directly or indirectly, *within the shortest time*. Industries which will meet actual needs and are highly profitable, but which do not contribute to exports to A, would have to be refused the benefit of foreign capital if the guarantee of convertibility must be attached as a condition. Thus, in order to encourage private foreign investment for the furthering of the economic development of the under-developed countries, we might actually end in a distortion of the latter's economic development in an atmosphere of increasing regimentation and control, which cannot even offer non-discriminatory treatment to those foreign investors who are interested in certain fields.

This, unfortunately, is not yet all. In order to have some concrete evidence of its ability to maintain the specific convertibility, country B may be further required by country A through the agreement or treaty they will both sign to pledge a certain part of its revenue in currency A to this particular purpose. A special account would probably be established, while an administrator or joint-governmental com-

mittee would be appointed to supervise the operation of the special account and to advise on matters related to convertibility. In short, the government of country A, starting out from the premise that private enterprise in its own country should be given a free rein in the field of foreign investment, might find itself actively intervening in country B's economic life and policy in a direction which has a highly restrictive effect on private enterprise, even if it had no intention to do so. A rich source of confusion and dispute would now be available to anyone who has an ax to grind.

IV. Government Guarantee of Freedom from Expropriation and Its Effects

So much about the guarantee of convertibility. Let us now turn to the risk of expropriation, and consider whether it can be satisfactorily taken care of by means of a government guarantee. Unfortunately, the problems involved in this case do not seem to present any straightforward solution either. First of all, there is no unambiguous definition of the term "expropriation." Would, for instance, an excess profit tax be regarded as expropriation? Would the regulation by a government agency of utility rates or railway freight charges be regarded as such? Would an injunction on monopolistic practices be regarded as undue or expropriatory interference? In the case of nationalisation, one scheme of compensation may be considered expropriatory, while another scheme may be considered quite fair. In fact, we could continue to name debatable cases like these almost indefinitely. The concept of expropriation reflects an agglomeration of terms such as "legitimate profits," "fair returns," "just compensation," etc., which do not possess any generally accepted meaning, and which may mean different things at different times or under changed circumstances even to the same person.

Secondly, it is almost certain that between a capital-exporting country and an under-developed country considerable differences of opinion tend to exist on the term "expropriation" and all other allied concepts, because the degree of interventionism which is generally accepted in the latter as a matter of course is more than likely to be subject to serious questioning in the former. The existence in a higher degree of the interventionist outlook seems to be the general tendency in the under-developed countries today. Among other things, the normal relations between the State, on the one hand, and private business, on the other, and between employers and employees are bound to be so widely different in these two groups of countries that what is considered fair by one may appear to be gross injustice to the other. These differences are bound to be reflected in the laws of these countries and in the spirit in which the laws are administered.

Thirdly, it is, of course, possible to define in more or less exact terms certain acts as expropriatory and confine guarantees to them alone. The physical seizures of plants and nationalisation without any compensation at all, would, for instance, present a clear-cut case of this kind. But the usefulness of limited guarantees of this nature is extremely doubtful, inasmuch as any deliberate attempt by the authorities of an under-developed country to circumscribe the rights of foreign investors or to expropriate their property is unlikely to be so blatant and crude as to enable the injured party to invoke guarantees of the restricted type. For the same reason, such limited guarantees cannot serve the same purpose as an inducement to private foreign investment as general guarantees against expropriation would.

From the above remarks we are perhaps justified in concluding that it is well-nigh impossible to embody in an agreement a comprehensive list of acts which are proscribed to the under-developed and "capital-receiving" country so as to exclude the possibility of diverse interpretations altogether. Apart from at best a short prohibited list of expropriatory acts which would not be resorted to in any case by any responsible government in its right senses, such an agreement between a capital-exporting country and an under-developed country could only provide a procedural framework through which disputes may be aired, and, if possible, settled. As we have repeatedly emphasized before, there are bound to be disputes. But since a uniform interpretation of the term "expropriation" is wanting, these disputes cannot be settled by appealing to a common code of conduct. What will happen would, therefore, depend upon the moral and material force which each disputant can muster for his own support. But while settlements can be reached in this manner, and possibly with apparently relative ease, whatever the outcome of the disputes may be, the conflict of ideas and the direct or indirect participation of the two governments are certain to bring about at one time or another the charge of attempts by the investors' country to impose its own social philosophy on the under-developed country and to interfere in the latter's internal affairs. The familiar cries of imperialism and exploitation would again be heard. Regardless of the original intentions of the investors and their government and the merits of any particular case in question, it seems that one must concede that conditions as we have just described would not be conducive to the expansion of private foreign investment.

In order to avoid possible charges of expropriation and arbitrary acts in the future, the government of an under-developed country might consider it advisable to declare in the outset certain fields as closed to ordinary private foreign investment. Taken together with the requirements of maintaining convertibility mentioned earlier, this would mean

a drastic limitation in the field of foreign capital investment which would be disadvantageous to the investors and harmful to the under-developed country. Assuming that potential investors who wish to have an open field for their activities abroad would accept such limitations at all, the only field which would be reasonably free from the risks involved in the two cases of guarantees would probably be confined to what, for lack of a better term, we may call "light export industries." But even then, the need to expand exports to the investors' country and the system of priorities and allocations that may be necessary for this purpose would from time to time interfere with what may be regarded as fair and nondiscriminatory treatment both among the foreign investors themselves and between the foreign and domestic enterprises. In short, we are far from being rid of our troubles.

V. Summary and Suggestions of a New Approach to the Problem of International Investment

To sum up, let us recapitulate briefly the pitfalls of the guarantee system we have thus far discussed. These fall into three major categories:

1. Adverse effects on the economy of the under-developed country as a result of the need to over-emphasize the promotion of exports to a particular country or group of countries through the adoption of increasingly interventionist methods, and to utilize foreign capital for a limited number of purposes only;
2. Severe restriction of the field of activities that can be thrown open to foreign investors without any absolute guarantee of freedom from expropriation or convertibility in return; and
3. Increasing intervention by the investors' government in the economic affairs of the under-developed country and in the policy and administration of the latter's government, and, what is more important, the belief that such intervention exists, leading to charges of imperialism and exploitation, with all the attending effects which cannot but be detrimental to the expansion of international investment.

It cannot be overemphasized that we are not at all arguing against the expansion of private foreign investment as such. Nor would we deny that given a combination of favourable circumstances, it may be possible to avoid the above pitfalls with respect to some particular under-developed country; and that as soon as the world shortage of a particular currency is diminished through normal development, the burden of convertibility would tend to decrease. But it seems to us that the pitfalls of the guarantee system are dangerously real *in the context of the economic and political conditions that exist in the world at present*,

and it is with this in mind that we have to question the wisdom of using guarantees of convertibility and freedom from expropriation under a system of bilateral treaties as an inducement to private foreign investment. The situation would be entirely different if the investors' government merely uses these guarantees as a bait to private enterprise and investors without any serious intention to invoke its treaty rights to call the governments of the under-developed countries to account when acts or circumstances violating the guarantee take place, but cannot openly say so for political reasons. If this were the case, the system of guarantees would amount to a public subsidy of private foreign investment, the merits of which must be judged from a different angle. While one may have a sneaking feeling that this may actually be in the mind of certain people who would advocate government guarantees for private foreign investment, one obviously could not work on this assumption.

Returning, therefore, to our train of thought, let us now inquire how the under-developed countries would react to a proposal of concluding bilateral treaties with a capital-exporting country as a result of which they would be liable to account for guarantees of convertibility and freedom from expropriation in exactly the manner as we have described. For this purpose we might conveniently divide the under-developed countries into two groups: those which would industrialize quickly according to a, let us say, ten-year or five-year plan, at any cost, even without the help of foreign capital, and those which would prefer a slower rate of development if foreign capital could not be secured on reasonable terms. In the political set-up of the world today, most if not all of the under-developed countries of the first group have their economies patterned after the Soviet example, or else have strong leanings towards a regimented economy. We refer here chiefly to countries bordering on the Soviet Union. As foreign capital from a "capitalist country," especially in the form of direct foreign investment, is not likely to be welcomed in any case by these countries on political grounds, the restrictive effect of the implications of the guarantee system would tend to fall completely on under-developed countries in the second group. For these countries the choice would be between a slower rate of development and a higher rate of development with possibly many undesirable complications. Or else they would have to adopt greater regimentation. It does not seem improbable that under the circumstances these countries which the flow of private investment is designed to help would be the worst sufferers.

As for the investor country, a mixed reception to its capital export under the guarantee system and the creation of a tendency towards in-

creasing regimentation in the under-developed countries as a result of the guarantee system would be very far from its expectations and desires. This leads us to the interesting question as to whether a change of emphasis and a different approach would not bring us nearer to a satisfactory solution of the problem confronting us, *i.e.*, to find the ways and means of inducing an expansion of foreign investment for the development of under-developed countries.

In the first place, recent economic thinking on the problem of foreign investment for the development of the under-developed countries, and especially in these countries, seems to have been chiefly concerned with stressing the latter's need for foreign capital and what foreign capital can do in various industrialization projects. It would appear advisable to place more emphasis on what the under-developed countries should and could do themselves in creating a favourable atmosphere in which investment capital would come from abroad of its own accord in search for higher returns, and, what is more important, *to stay within these countries through continual re-investment*. The establishment of the rule of law in the economic field and the pursuit of a stable and intelligent policy of promoting competitive enterprise in the true sense would probably do more in encouraging the inflow of foreign capital than any initiative on the part of the investor countries. Admittedly, all this cannot be done in a day. But even a system of guarantees would not perform miracles once the possible stimulation to foreign investment when it is first introduced has worn off. In other words, the initiative should and could be taken by the under-developed countries especially at a time as the present when the urge to invest abroad seems to be fairly widespread among potential investors.

Secondly, it seems that the encouragement of private foreign investment should not be interpreted in the narrow sense of encouraging private direct investment, including equity investment, alone. More emphasis should be placed on the investment of private funds through an international agency such as the International Bank for Reconstruction and Development. The lending activities of the latter should accordingly be expanded so that they would not be confined primarily to large investment projects only. In fact, as long as private direct investment requires excessive guarantees, any extension of the activities of an international lending agency should not be regarded as "wasteful competition" with private investment, especially if the funds are derived from subscriptions by private investors, while borrowers do not necessarily have to be native entrepreneurs of the under-developed countries. The use of an international agency for the placement of private funds abroad would remove the stigma of charges of imperialism and would

have other advantages as well.⁵ For one thing, it would help to create more favourable conditions for direct private foreign investment.

Thirdly, while over-emphasis on security seems to have become a habit of thought with many of us, the *raison d'être* of free enterprise, i.e., individual risk-bearing, tends to be forgotten. It may be a good thing that entrepreneurs have become more cautious in the foreign field. But to insist on the complete guarantee of convertibility, etc., is almost like insisting on profits before they are even made, or the ability to enjoy a good meal before it is even prepared. Do we detect in this tendency a decline of the entrepreneurial spirit? While this is a debatable point, it seems at least worth while for the potential investors to re-examine their attitude, especially if the under-developed countries undertake the initiative to encourage the inflow of foreign capital as referred to above.

Fourthly, instead of relying on government guarantees and bilateral agreements to maintain the guarantees, both the under-developed countries and the capital-exporting countries should, in our opinion, agree in the first place on an international code of conduct in the field of international investment,⁶ thus making an important step forward in putting international investment on an expanding basis. They should establish at the same time an arbitration agency to which all disputes arising out of investment activities taken in cognizance of the international code could be referred, and which should be vested with full authority to decide on these disputes.

Without going into details, suffice it to say that this international code should not attempt more than finding the lowest common denominator among the parties concerned although it should cover sufficient ground so as to be really useful as a safeguard against abuses and as an encouragement to foreign investment. For to attempt more would lead us to the same pitfalls as in the guarantee system, while to attempt less would make the code entirely useless. These twin requirements could be fulfilled if our code would provide for (1) nondiscriminatory treatment

⁵ See the author's article on "International Capital Investment and the Development of Poor Countries," *Econ. Jour.*, Vol. LVI, No. 221 (March, 1946), pp. 86-101.

⁶ The idea of an international code for the treatment of foreign investment is not new. Preliminary discussions on the subject were conducted by a sub-committee of the League of Nations before the end of the war. It was also referred to in a proposal on the terms of reference of the United Nations Sub-commission on Economic Development, presented by the Chinese Delegation to the Economic and Social Council in 1946. It was again obliquely referred to in the recent Havana Charter on international trade. But the idea has never been followed to its logical conclusion except in the case of the "International Code on Fair Treatment for Foreign Investments" suggested by the International Chamber of Commerce. The last-mentioned document, however, seems to have gone too far to be either desirable in the light of our previous analysis or, for that matter, acceptable to many countries.

in every respect to all investors and enterprises irrespective of their nationality, who would be given the right of appeal for any infringement of this principle to the international arbitration agency whose decision would be final, and (2) freedom to impose exchange and trade restrictions by the individual states only in so far as they are sanctioned by the International Monetary Fund and the International Trade Organization. To these may be added a clause for the prevention of international double-taxation.

These principles would seem to fulfill to a considerable extent the function which government guarantees as discussed in this paper are supposed to have, without, however, the rigidity of the latter. Investors would be given a reasonable guarantee of convertibility and freedom from expropriation, inasmuch as any violation of the code would bring with it a ruling from the arbitration agency, while the advantage of elasticity would be preserved. Bilateral agreements could still be concluded so long as they do not come into conflict with the principles enunciated in the code. But imperialism could no longer be charged to any particular country which abides by the code, while economic policy in the wider sense would remain the concern of the individual countries, which, left to themselves to consider the effect of any move on the inflow of foreign capital, would have every inducement to be reasonable and moderate. On the other hand, any country which declines to adhere to this minimum code would automatically declare itself as unsuitable for foreign investors. In this manner, the code would serve as a real test to the good will of all countries without which no amount of guarantee by any government could be sufficient in the long run to enlarge the flow of international investment.⁷

⁷ It seems to us that the Economic and Social Council of the United Nations, in conjunction with some of the Specialized Agencies, would be the most logical sponsor of an international convention to adopt such a code as we have outlined. Once the code has been adopted, the authorities set up under it should proceed to examine the laws and practices governing foreign investments in the contracting countries with a view to the elimination of those contrary to the spirit of the code.

ANALYSIS OF CONSUMPTION TAXES IN TERMS OF THE THEORY OF INCOME DETERMINATION

By E. CARY BROWN*

I. Introduction

Many criteria have been developed for testing general fiscal policies as well as particular expenditure and tax programs.¹ One important analytic question that always intrudes itself into such discussions is the deflationary effect of a particular tax structure as compared with its alternatives. Many taxes have been reappraised in the light of the modern theory of income determination, but there remain certain gaps in the analysis of consumption taxes.² At least partly, they result from the failure to take fully into account the effects on consumer spending of the higher price level induced by the tax. This paper attempts to remedy these defects in the present analysis.

The accepted doctrine is that a given volume of revenue raised by consumption taxes will reduce the level of aggregate real consumer expenditures more than will an equal revenue raised through income taxes.³

Underlying this view are four simplifying propositions. (1) The consumption tax is fully shifted in higher prices to consumers, whereas the burden of the income tax remains on the income recipient. (2) A given volume of tax dollars taken from a household with a *given* pretax income will reduce real consumer spending (*i.e.*, consumption expenditures net of the consumption tax) by some specified amount, regardless of whether the dollars are raised by income or consumption taxes. In

* The author, assistant professor of economics at Massachusetts Institute of Technology, wishes to acknowledge the help he has received from Paul A. Samuelson, Richard A. Musgrave, and Daniel B. Suits.

¹ See, for example, Richard A. Musgrave, "Fiscal Policy in Prosperity and Depression," *Am. Econ. Rev., Papers and Proceedings*, Vol. XXXVIII, No. 2 (May, 1948), pp. 383-94; and Arthur Smithies, "Fiscal Policy" in Howard S. Ellis (ed.), *A Survey of Contemporary Economics* (Philadelphia, Blakiston, 1948), pp. 182-87.

² See, however, an able article recently published by John F. Due—"A General Sales Tax and the Level of Employment," *Nat. Tax Jour.*, Vol. II, No. 2 (June, 1949), pp. 122-30. See also Franz Gehrels, "Inflationary Effects of a Balanced Budget under Full Employment," *Am. Econ. Rev.*, Vol. XXXIX, No. 6 (Dec., 1949), pp. 1276-77.

³ The regressiveness of the tax, the level of taxation, and the distribution of income can all affect the result. See Richard A. Musgrave and Mary S. Painter, "The Impact of Alternative Tax Structures on Personal Consumption and Saving," *Quart. Jour. Econ.*, Vol. LXII, No. 4 (Aug., 1948), pp. 475-99.

other words, it is assumed that the *number* of dollars of taxes and not the *form* in which they are taken determines how much a given household with given income will cut back on its spending.⁴ (3) Taxes on consumer spending are regressive. Consumer expenditures constitute a decreasing percentage of income as the income of the household increases; consequently, proportional taxes on these expenditures must involve a lower per cent of higher than of lower incomes. (4) The *marginal* propensity of households to consume decreases as income increases. Taxation of high-income units will, therefore, not depress aggregate consumer expenditures as much as will equal changes in income induced at the lower end of the income scale.

The full argument goes as follows. A larger fraction of consumption-tax revenue is collected from those with low incomes than is collected under a proportional income tax (propositions 1 and 3); and the low-income groups have the higher marginal propensity to consume (proposition 4). As all tax dollars taken from a given family have a similar effect on its spending (proposition 2), consumer expenditures are more adversely affected by a consumption tax than by an income tax of equal dollar yield.

The first proposition in regard to the incidence of these two taxes will not be examined in this paper. The conventional assumptions with regard to their shifting will be accepted for purposes of the following discussion.⁵ The third proposition, that a proportional consumption tax is regressive, has a firm empirical basis—the *average* propensity to consume clearly decreases as income rises.

The fourth proposition, that the *marginal* propensity to consume declines with rising income, is more open to question. The present tendency is to discount, in varying degrees, the significance of the differences in the marginal propensity to consume of households at various

⁴In a recent study of tax burdens, Musgrave and Painter write: "This [their] procedure also assumes that the consumption tax is paid by the consumer, as might be the case with an expenditure tax, assessed on consumer expenditures as a whole. The difficulties arising from changes in price level, due to varying levels of consumption tax are thereby avoided. Again, this simplifying procedure will hardly invalidate our major conclusions." *Ibid.*, p. 479n.

Earlier, Musgrave has stated: ". . . the contention that a given contraction of consumption requires heavier levies if secured by income than by sales taxation, appears to me rather dubious. If the consumer will maintain his consumption standards by dissaving when confronted with a lowered net money income, he will do pretty much the same when confronted with higher prices at a given money income. There is no clear argument in favor of sales taxation on these grounds." R. A. Musgrave, "Discussion," *Am. Econ. Rev., Papers and Proceedings*, Vol. XXXII, No. 1, Pt. 2, Suppl. (Mar., 1942), p. 103.

⁵If the tax is not shifted, its effects on consumer outlays may be considerably different from the one ordinarily assumed. Should consumption taxes fall partially on business profits, for example, they would be much more progressive than we usually conceive and have a smaller impact on consumption expenditures. On the other hand, the shifting of an income tax would considerably reduce or eliminate its progressivity.

levels of disposable income.⁶ Indeed, if one takes the extreme view that the household consumption schedule is linear, and thus that the marginal propensity to consume is the same at every level of disposable income, the above analysis leads to the startling conclusion that there is no difference between the consumption effect of an income or consumption tax of equal revenue.

But can this analysis be accepted fully? Is it proper to assume, as is done under proposition 2, that a reduction in income by an income tax will have the same effect on real household consumption as will a reduction in real income through the higher prices that result from a consumption tax?

This proposition is obviously incorrect if the consumption tax is expected to be temporary or if it induces the belief that prices will rise still farther. In the first case, consumption taxes might then induce a sharp postponement of consumer expenditures until the tax was repealed. In the second, purchases would be speeded up. Both of these possibilities are here ruled out: the first, because the tax change will be assumed to be permanent; the second, because it seems unlikely that the tax mark-up would set in motion a belief in a continued rise in prices. Even setting aside these possibilities, I hope to show that *there are differences in the consumption effect of equal revenues yielded by an income tax and a consumption tax—differences that would exist even if all consumer units had the same marginal propensity to consume.*

To elaborate these differences, I shall consider separately the case in which money consumer outlays depend on money incomes (Section II) and the perhaps more general one in which consumer real outlays are a function of real incomes (Section III). Some qualifications to the argument are noted in Section IV. While primary emphasis is placed upon consumption taxes, the proportional income tax—of more analytic familiarity to the reader—will be examined for purposes of useful comparison. The analysis also assumes, unless otherwise noted, that government outlays remain the same and that appropriate monetary steps are taken, wherever necessary, to hold interest rates at a constant level.

II. Consumers' Money Illusion

Consider first the case in which *money* consumer expenditures de-

⁶"... [T]he change in consumption corresponding to a movement from one income class to another is constant for all income classes. Thus consumption is approximately invariant with respect to changes in the income distribution. . ." Lawrence R. Klein, *The Keynesian Revolution* (New York, Macmillan, 1947), p. 59.

For a less extreme position, see Harold Lubell, "Effects of Income Redistribution on Consumers' Expenditures," *Am. Econ. Rev.*, Vol. XXXVII, No. 1 (March, 1947, and further qualification in December, 1947) and Musgrave and Painter, *op. cit.*

pend solely on *money* disposable income. This case is usually viewed as one involving a money illusion. Under this hypothesis a consumer with a fixed dollar income is regarded as spending a fixed number of dollars on consumption, regardless of the level of prices. This constancy of his money consumption expenditures means that a rise in prices will decrease his *real* consumption; a fall will increase it. One such consumption function is shown in Figure 1 as a linear relationship between aggregate consumption and aggregate money income before taxes. If taxes and transfer payments are tentatively assumed to be zero and if prices are fixed, CA traces the level of both real and money consumption at different levels of money and real personal income.⁷

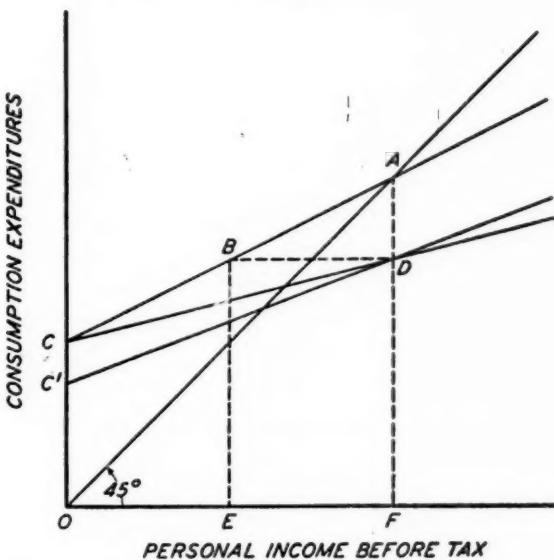


FIGURE 1

Now suppose that a proportional income tax is imposed. At each level of personal income, disposable income will be reduced by the amount of the taxes collected at that level of income. A portion of the tax will be met by a reduction in consumption and the balance by a reduction in saving. This fractional breakdown will be determined by the marginal propensity to consume disposable income. The higher is the marginal propensity to consume, the larger will be the downward

⁷ I am neglecting corporate savings and using the simplifying relationship—Disposable Income + Income Taxes = Personal Income; Personal Income + Consumption Taxes = Net National Product.

shift in the consumption function at each level of personal income. So long as the marginal propensity to consume is less than one, the taxes collected at any level of personal income will exceed the reduction in consumption. In order, then, to cut down consumption by a dollar, one would always have to raise more than a dollar in income taxes. Note that by our assumption of no shifting of an income tax by way of higher prices, all of the above results hold for both money and real magnitudes.

In Figure 1 the pretax consumption function is CA. The income tax rotates the consumption function rightward (and downward) to CD. At income OF, income taxes reduce disposable income to the pretax level at OE; thus post-tax consumption outlays, DF, at income level OF are equal to pretax consumption outlays, BE, at income level OE. The rightward shift in the consumption function is equal to the taxes collected ($BD = EF$ at income OF). The reduction in consumer outlays, AD, at income OF will always be less than taxes unless the consumption function, CA, is tilted up 45° or more, that is to say, when the marginal propensity to consume is equal to or greater than one.

Consider now a proportional consumption tax imposed under the same conditions. The consumption tax is assumed to be shifted fully in higher prices, and the base of the tax is assumed to be consumer outlays before inclusion of the tax in price (real consumer outlays). At any level of money personal income, no change in the amount of money consumer expenditures will take place after the tax is imposed. Since there has been no reduction in money personal incomes, money savings will not be drawn down. Money consumer expenditures having remained the same and prices (inclusive of the consumption tax) having risen, real consumer outlays, measured in pretax prices, will be reduced exactly by the amount of the tax collected at any given level of money income.

The postconsumption-tax consumption function is shown in Figure 1 by C'D. It has a different slope than the postincome-tax consumption function. Instead of rotating around C at a zero income, it shifts downward to C'. Since money consumer expenditures are unaffected by the tax, real consumer expenditures will be reduced by the amount of the consumption tax at every level of income. In contrast, the income tax did not reduce a zero pretax income so that money (and real) consumer outlays remained unaffected at a zero income level. The vertical distance between the CA schedule and the C'D schedule represents the amount of consumption tax that would be collected at the given level of income —AD at income OF. The amount of income tax is represented by the horizontal distance between the two schedules—BD at income OF.

Given a money illusion, then, a dollar of consumption tax will decrease real consumer outlays more than will a dollar of income tax so

long as some part of extra income is saved. This result is independent of the fact that more of the consumption tax may be collected from the low-income groups who may have a higher marginal propensity to consume than the higher-income groups from which a larger portion of the income tax may be extracted. If these latter differences, which depend on curvature in the consumption function, are significant, they would strengthen this effect—the consumption tax would become relatively more repressive of consumption.

Let us take one further step and bring in net investment and government outlays on goods and services. To keep our attention strictly on

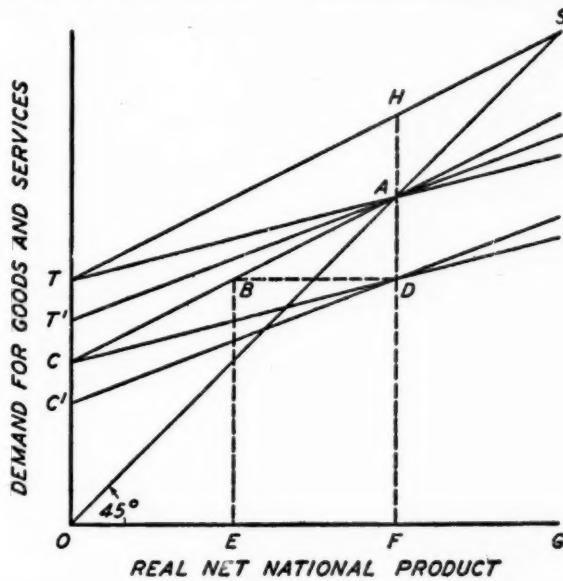


FIGURE 2

consumption outlays, we shall make the simplifying assumptions that net investment and government outlays on goods and services are independent of the level of aggregate income and that corporate savings are zero. In Figure 2 we have plotted consumer, government, and business demands for goods and services on the horizontal axis and the level of real net national product on the vertical. To consumer demand for goods and services we add net investment and government demand for goods and services to get total demand for goods and services, shown by the schedule TS. The 45° line represents the supply of goods and services (net national product). The only static equilibrium possible would be represented by the intersection of the two schedules, at S cor-

responding to a net national product of OG . But if we let OF ($= AF$) stand for the full-employment level of net national product, we are faced by an inflationary gap: real demand for goods and services, HF , exceeds their supply, AF .

Now the inflationary gap is to be closed by new tax levies, and we also assume government outlays and net investment are unaffected by the taxes imposed.⁸ Clearly consumer outlays must be cut back by AD ($= AH$) at net national product level, OF . According to the previous analysis, proportional income taxes greater than AD must be imposed. In Figure 2 the effect of the appropriate level of income taxes is shown. The consumption function is rotated rightward and downward from CA to CD and total real demand for goods and services now equals their supply. The equilibrium level of income taxes is BD which is greater than the reduction in real consumption of AD .

If, instead, consumption taxes are levied, they will raise the general level of prices and of money net national product. Personal incomes before tax and real net national product will remain unaffected. For example, if at the level of net national product OF in Figure 2 a consumption tax were imposed, prices would rise and money net national product would rise but no additional payments would be made to the factors of production to become their personal income. Instead, the added revenues of business firms would be drained off by the government through consumption taxes. Or, if we wished, we could think of consumption taxes as being imposed on consumers directly, without any changes in prices charged by business firms. In either event, the relationship between real net national product and money personal incomes before taxes would not change through imposition of the tax. And, since we are working with a consumers' money illusion, the consumption function relating money consumption and money income would remain undisturbed. The real consumption function would fall to $C'D$ and a full-employment equilibrium would be established. The consumption-tax collections, represented by the difference between $C'D$, the post-tax real consumption function, and CA , the money consumption function, would fall short of income tax collections in equilibrium at OF . They would amount to AD . Fewer consumption tax dollars would be necessary to achieve the reduction in consumption.

One more comment should be made before leaving this particular case. The simplified balanced-budget theorem holds that a dollar of added government expenditure and a dollar of added taxes results in an addition to the level of national income by a dollar.⁹ This result is

⁸ Expenditures of the government and net investment of firms would be exempt from the consumption tax, as is generally the case.

⁹ See Paul A. Samuelson, "The Simple Mathematics of Income Determination," *Income, Employment, and Public Policy* (New York, Norton, 1948) and the references he cites.

usually believed to be achieved by any kind of tax. But, even under simplified assumptions, an expansion of *real* income will not result from a larger balanced budget if a money illusion in consuming is present. In the case at hand, if a dollar of expenditure were added to government outlays and a dollar of consumption taxes were added to revenues, the real multiplier would be zero, not one. The reason for this is that the consumption tax, in the presence of a money illusion, reduces real consumption initially by as much as government expenditures add to the demand for goods and services. Thus, no increase in equilibrium real income results. Each dollar increase in consumption

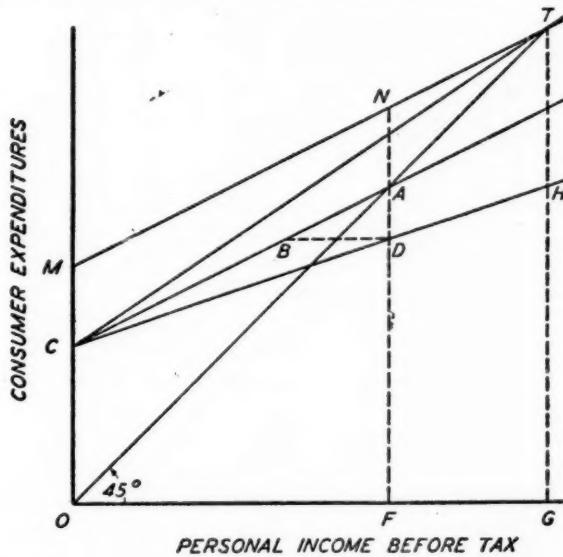


FIGURE 3

taxes and government expenditures will increase *money* income by a multiplier of just one. This purely money increase in income is cancelled by the rise in prices. This tax-induced price rise is just large enough to cause the required "forced savings" on the part of consumers. Real consumption drops by enough to release the necessary resources to the public sector of the economy, with the total volume of employed resources remaining the same.

III. No Consumers' Money Illusion

The absence of a money illusion means that *real* consumption depends on *real* disposable income. If prices rise, real consumption will be reduced, but not by as much as in the preceding case. There will be

an increase in money consumption expenditure and a decrease in money savings, both of which remain constant when a full money illusion is present. A proportional income tax will affect this function in the same way as before, since, in both instances, prices remain constant. Thus, the pretax consumption function in Figure 3 will be shifted rightward and downward from CA to CD, the extent of the shift depending on the rate of the proportional income tax.

This shift can now be duplicated exactly by a consumption tax. There being no money illusion, the consumption function will be rotated around C, from CA to CB, for, at a zero level of money income, real income will remain zero despite the tax-induced price change. Thus, real consumption at a zero income will not be changed by the consumption tax nor by the income tax. The increase in money consumer outlays is shown by the schedule MN. It depends partly on the size of the constant in the real consumption function—*i.e.*, the amount of real consumption at a zero income level (OC in Figure 3). If this constant were zero, so that the average propensity to consume were constant and always equal to the marginal propensity to consume, the money consumption function in the absence of a money illusion would be unaffected by the consumption tax. This case would then become identical with the one we previously considered in which a money illusion was present. Empirically, however, the intercept appears definitely to be positive, giving a falling average propensity to consume.

What can be said about the relative *rates* of the two taxes? The consumption-tax rate must inevitably be larger than the income-tax rate to achieve a given reduction in consumption. Assume, for example, that personal income before taxes is \$100 and income taxes of \$25 are necessary to reduce consumer expenditures to the required level. This is a rate of 25 per cent that reduces real disposable income to \$75. To achieve the same result by consumption taxes, the \$100 income must be divided through by sufficiently higher tax-induced prices to reduce the real disposable income to \$75. This will necessitate price rises of $33\frac{1}{3}$ per cent ($100 \div 1.33\frac{1}{3} = 75$), and, thus, a consumption-tax rate of $33\frac{1}{3}$ per cent. Notice that the *rates* of tax in real terms are equal. The consumption-tax rate, $33\frac{1}{3}$ per cent, divided by the new price level, $133\frac{1}{3}$ per cent, equals the income-tax rate, 25 per cent.

Although the consumption-tax rate must be higher than the income-tax rate, it does not follow that the *yield* of the consumption tax will be the larger. The two taxes have different tax bases—consumption outlays (exclusive of consumption tax) in the one case and total income in the other. The schedule, MN, in Figure 3, represents the amount of money consumption at different levels of money personal income

following imposition of the consumption tax. This schedule has shifted upward parallel to the pretax consumption function, CA. The amount of tax collected at various levels of income is represented by the vertical distance between schedules MN and CD—ND at income level OF. Income taxes are shown by the horizontal distance between schedules CA and CD (BD at income OF). To facilitate comparison, income taxes have been added vertically to the real consumption schedule, CD, to get schedule CT. Thus, at income level OF, income taxes, BD, have been added to real consumption, DF, to give one point on the schedule, CT.

Consumption-tax collections are greater than income-tax collections up to the income level OG, and beyond that level they fall short of them. Income OG, at which the two are equal, is the point at which personal saving is exactly zero: taxes, TH, plus real consumption, HG, equal income, $OG = TG$. At this level of income, the higher rate of the consumption tax is just offset by its lower base. At lower income levels where personal saving is negative, consumption-tax collections necessary to achieve a given reduction in consumption are greater than income-tax collections; at higher levels where personal saving is positive, consumption-tax collections are less than income-tax collections. Whether or not each dollar of consumption taxes is more or less deflationary than a dollar of income taxes will depend, then, upon where the equilibrium level of income happens to fall. *Per dollar of revenue yield, the consumption tax will decrease consumption expenditures more than, equal to, or less than, an income tax depending on whether, at the equilibrium level in question, personal savings¹⁰ are more than, equal to, or less than, zero.* Equilibrium personal savings will depend on how high taxes must be pushed—on how large is the gap between the community's thriftiness and the needs of the government and business.

Let us bring these factors in. Two situations are depicted in the diagrams below. In Figure 4, equilibrium savings¹¹ are zero; in Figure 5, they are positive. In each case demand for goods and services is plotted on the vertical scale and real net national product on the horizontal. The pretax consumption schedule is shown by CA; the total demand for output inclusive of government and business by TH. Total demand for output, HF, exceeds the full-employment real supply, $OF = EF$, by the amount HE, until taxes are imposed. Equilibrium is achieved by

¹⁰ It should be recalled that we have assumed net corporate savings at zero.

¹¹ It is aggregate savings not personal savings alone when the transition is made from a consumption function on personal income to one on net national product. Net national product equals consumption plus taxes plus personal and corporate savings. By equilibrium savings is always meant the amount of savings forthcoming at the equilibrium level of income.

cutting back real consumer outlays to BF and total real demand to EF. ME represents money consumer outlays after imposition of the consumption tax and CE represents consumer outlays plus income taxes, developed as in the preceding diagram. As can be seen, equilibrium income-tax collections, $EB = DB$, equal equilibrium consumption tax collections, EB , at full-employment net national product, OF. Aggregate savings are zero; the schedules CE, real consumption expenditures plus income taxes, and ME, real consumption expenditures plus consumption taxes, pass through the 45° line (personal income) at this income level and exhaust the total product.

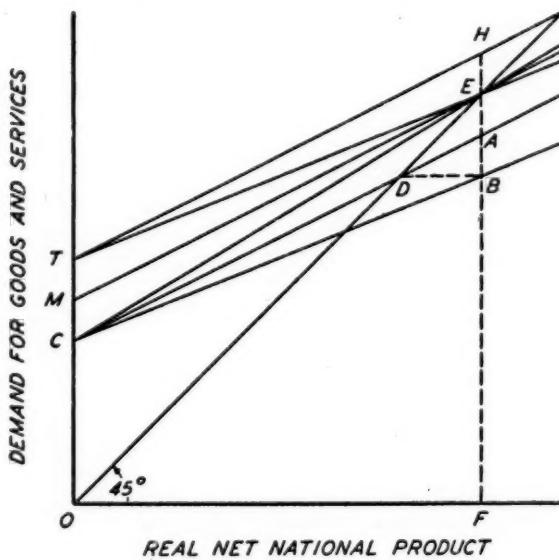


FIGURE 4

In Figure 5, however, equilibrium savings are positive. Total demand for goods and services, HF, exceeds full-employment supply, $EF = OF$, by HE. Equilibrium income taxes, $BI = BD$, plus equilibrium real consumption, BF , are less than income, EF . Equilibrium consumption taxes, GB , are less than equilibrium income taxes. Only at J are the two equal; and, since this point falls on the 45° line, savings would be zero were this the equilibrium level of income.

Except under extreme war conditions or after heavy war destruction, it is unlikely that full-employment equilibria would yield zero or negative savings. Nevertheless, if we were to divert roughly half of our output away from consumption, as during the last war, the necessary

cutback in real consumption might be very hard to induce, particularly in view of the highly liquid state of the economy. Saving might have to become negative before consumption would drop to the required level. Barring this case, our conclusion is as follows: in the absence of a money illusion, consumption taxes are more effective, dollar for dollar,

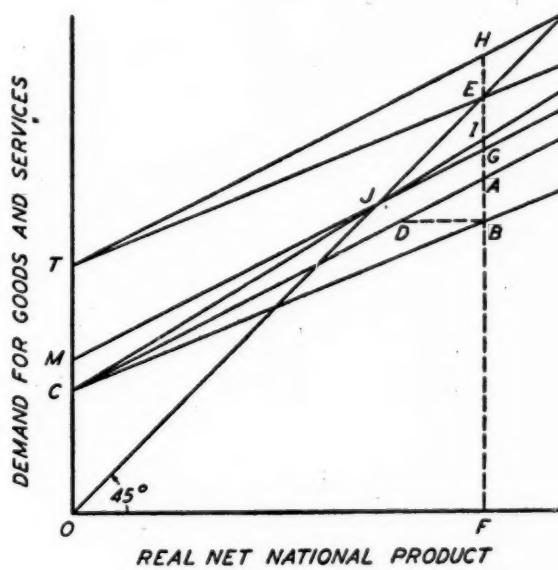


FIGURE 5

in cutting back consumer outlays than are income taxes—and this conclusion holds even though everyone be assumed to have an identical marginal propensity to consume. However, they are less effective than when a money illusion is present (except in the unrealistic case discussed above where the real consumption function passes through the origin). Consumption taxes must be larger than the inflationary gap when no money illusion is present; they must just equal the gap when there is a money illusion.

IV. Some Additional Factors and Qualifications

1. The first set of qualifications applies to the assumption so far maintained that consumer expenditures depend solely on the level of income. We have thus ignored the effects through taxation that might arise on the monetary side. For example, if consumption taxes raise the general level of prices, as assumed, and if the quantity of money re-

mains constant, the added demand for money for transactions, in the absence of a counter-balancing reduction in demand for it in other directions, would raise interest rates.¹² Higher interest rates may have some influence on consumption, but in which direction and how much is difficult to say. Studies of the consumption function have not yet been able to isolate a significant relationship between interest rates and consumption.¹³ The principal effect of higher interest rates would be to discourage investment, but to what extent investment is affected by monetary tightness is subject to dispute among contemporary writers. In any event, this effect is within the control of the central bank, and could be exercised independently of any tax change.

2. Higher prices induced by consumption taxes would reduce the value of real wealth (given a constant stock of money). If consumption depends on real wealth as well as on real income, real consumption would fall. We do not yet have an empirical basis for holding that this effect is important,¹⁴ though it would work in favor of greater deflation from consumption taxes.

3. Still another factor favoring the consumption tax would be the higher marginal propensity to consume of the lower-income groups which we have so far assumed away.

4. While these factors might strengthen the deflationary impact of the consumption tax vis-à-vis the income tax, there are other factors that give the income tax a better case, even when judged solely by its deflationary impact. The ability of firms to shift the consumption tax fully, as assumed above, means that such a tax would leave business dollar profitability unimpaired. Income taxes, on the other hand, would fall on profits and might well reduce net investment as well as consumer spending.

5. It seems likely, though this issue may be debated, that a consumption tax would be more apt to put pressure under wages than would an income tax. During the war, for instance, wage revisions were tied to a cost-of-living index that included consumption taxes. It is significant that the policy was not to maintain real personal disposable income or "take-home wage rates." Induced wage changes could cut down the deflationary impact of the consumption tax.

On balance, it is not clear to what extent the preceding analysis should

¹² "Increasing such [operating-cost] taxes points to higher prices. . . . At the same time, higher prices will increase transactions-requirements for cash." Albert Gailord Hart, *Money, Debt, and Economic Activity* (New York, Prentice-Hall, 1948), p. 243.

¹³ "As far as statistical results are concerned, no econometrician has ever found a significant correlation between consumption and interest rates when the correlation between consumption and income is taken into account." Klein, *op. cit.*, p. 60.

¹⁴ Don Patinkin, "Price Flexibility and Full Employment," *Am. Econ. Rev.*, Vol. XXXVIII, No. 4 (Sept., 1948), pp. 554-55.

be qualified. Probably these considerations reduce the margin of the consumption tax over the income tax in cutting back demand for output.

V. Conclusions

The following conclusions are independent of the differing marginal propensities to consume of low-income and high-income groups, but assume an aggregate marginal propensity to consume of less than one.

1. If consumers have a money illusion, a dollar of consumption taxes will reduce real consumption by more than will a dollar of income taxes. A dollar of consumption taxes will reduce real consumption by the full dollar.

2. If consumers have no money illusion and the consumption function shows positive consumption at a zero level of income, a dollar of consumption taxes will reduce real consumption by more than, equal to, or less than, a dollar of income taxes depending on whether equilibrium savings are more than, equal to, or less than, zero. Consumption taxes will reduce real consumption by less than when a money illusion is present.

3. If consumers have no money illusion and the consumption function passes through the origin, the case is identical with the one in which a money illusion is present.

ALGEBRAIC APPENDIX

For those who prefer an algebraic argument to the one in the text, the following appendix is submitted. These symbols are used:

c = real consumption.

y_0 = real net national product at full employment.

i = real net investment.

g = real government outlays on goods and services.

a = real consumption at zero disposable income.

b = marginal propensity to consume disposable income.

t_y = income-tax rate.

t_c = consumption-tax rate.

I. Consumers' Money Illusion

A. Income Tax

An equilibrium is specified by the following equations:

$$(1.1) \quad c = a + b y_0 (1-t_y)$$

$$(1.2) \quad y_0 = c + i + g$$

The first equation is a consumption function that assumes equality between real net national product and personal income—corporate savings and indirect business taxes are zero. The second equation equates full-employment supply with demand for output.

Then, substituting for c in (1.2) and solving for equilibrium income taxes we have:

$$(1.3) \quad y_0 t_y = \frac{a + b y_0 + i + g - y_0}{b}$$

This expression tells us that the inflationary gap divided by the reciprocal of the marginal propensity to consume is equal to equilibrium income-tax revenues.

B. Consumption Tax

$$(2.1) \quad c(1 + t_c) = a + b y_0$$

$$(2.2) \quad y_0 = c + i + g$$

The first expression shows money consumption inclusive of consumption taxes to depend on money personal income (equal to real net national product on our assumptions). Solving for equilibrium consumption taxes, we find:

$$(2.3) \quad c t_c = a + b y_0 + i + g - y_0$$

That is to say, equilibrium consumption taxes just equal the excess demand over supply of output.

II. No Consumers' Money Illusion

A. Income Tax—same as I-A since prices have not changed.

B. Consumption Tax

$$(3.1) \quad c = a + b \frac{y_0}{1 + t_c}$$

$$(3.2) \quad y_0 = c + i + g$$

The first equation follows from our assumptions that the consumption tax is shifted and thus does not increase real net national product and money personal income. Real personal income, however, is reduced because prices have risen.

Solving for equilibrium revenues gives:

$$(3.3) \quad c t_c = \frac{(a + b y_0 + i + g - y_0)(y_0 - i - g)}{y_0 - i - g - a}$$

$$= \frac{b y_0 (y_0 - i - g)}{y_0 - i - g - a} + i + g - y_0$$

Notice that if a were zero, this expression would reduce to (2.3), the money-illusion case.

To compare the conditions under which equilibrium consumption-tax revenues exceed, equal, or fall short of equilibrium income-tax revenues,

subtract (1.3) from (3.3) and compare the difference with zero. Thus:

$$\frac{(a + by_0 + i + g - y_0)(y_0 - i - g)}{y_0 - i - g - a} - \frac{a + by_0 + i + g - y_0}{b} \geq 0;$$

which reduces to:

$$(3.4) \quad (1-b)(i + g - y_0) + a \geq 0.$$

Thus the height of consumption taxes relative to income taxes will vary directly with net investment and government outlays, with the height of consumption at zero income (a), and inversely with the height of the marginal propensity to consume.

This expression may also be arranged into the following form:

$$(3.5) \quad \frac{a + by_0 + i + g - y_0}{b} - (i + g) \leq 0$$

The first part of this expression is the inflationary gap divided by the marginal propensity to consume—in other words, equilibrium income taxes (1.3). If equilibrium income taxes equal net investment and government outlays, consumption taxes and income taxes will be equal. If taxes exceed net investment and government outlays, then savings must be zero—taxes and consumption add up to total product and income. If equilibrium income taxes fall short of $i + g$, they fall short of (exceed) equilibrium consumption taxes.

THE PROCESS OF TECHNOLOGICAL INNOVATION: THE LAUNCHING OF A NEW SCIENTIFIC INDUSTRY*

By W. RUPERT MACLAURIN**

Economists owe a major debt to Professor Schumpeter for understanding intuitively the critical significance of innovations in economic development. Yet until quite recently we have neglected to explore his provocative suggestions.¹ There are encouraging signs that this is changing. For example, Dr. Arthur Cole at Harvard has dedicated himself to unravel the rôle of the entrepreneur in economic history. Under his stimulus there is now a considerable group of people actively interested in entrepreneurship.

I want to attempt here to add to the small but growing body of published material on innovation and entrepreneurship by discussing the process of innovation in the launching of a modern industry—radio.²

The economist, making empirical studies of industrial change, is faced at the outset with the difficult problem of whether to confine his analysis to measurable data. There is much that the statistician can do to explain the characteristics of economic development in modern industry. But there are many important questions that he cannot tackle at all. I have gained courage from my distinguished mathematics colleague, Dr. Norbert Wiener, who feels strongly that social scientists should ask the questions they think of most significance—not be too much worried

* This article was originally presented as a paper before the Research Center in Entrepreneurial History at Harvard under Dr. Arthur Cole and Professor Joseph Schumpeter. Some of the historical material has since been published in a book entitled *Invention and Innovation in the Radio Industry* (Macmillan, 1949), designed for radio engineers and the radio trade, and reproduced here by permission.

As Professor Schumpeter has recently died, I should like to pay tribute to the encouragement he gave to professional workers in very diverse fields. In my own case, since my days as a student at the Harvard Business School, he consistently pressed me to push forward with my investigations of the process of innovation. And in the case of this paper he strongly urged me to make it available to economists generally. It was his hope, and mine, that it would serve to stimulate the exploration of an area he believed of critical significance.

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¹ See in particular *The Theory of Economic Development* (Cambridge, Harvard University Press, 1934), *Business Cycles* (New York, McGraw-Hill, 1939), and *Capitalism, Socialism and Democracy* (New York, Harper, 1942). An exception to this lack of elaboration was Professor Taussig's *Inventors and Money Makers* (New York, Macmillan, 1915), and Taussig and Joslyn's *American Business Leaders* (New York, Macmillan, 1932).

² This and companion studies of the glass, lighting and paper industries were made possible by a grant from the Rockefeller Foundation to explore "the economics of technological change."

about measurement, and *do the best they can* with the information available.

The particular study reported here is a historical account of how the process of innovation took place when the radio industry was launched. Radio is an industry in which scientists and engineers have forced the pace of technological innovation. As a consequence, there have been radical shifts in the product and its applications about every ten years since 1900.³ I believe that such industries will increasingly become the norm and that we can expect existing products to be rendered obsolete almost continuously for many years to come. There is growing evidence that we are now living in a second industrial revolution, in which calculations based on assumptions of economic stability will be almost valueless.

Much of the traditional apparatus of economic analysis has been concerned with entrepreneurial decisions on costs and prices of existing products. Economists have apparently not yet come to recognize the full impact of science and engineering in making such decisions of secondary significance in the life of a firm. I do not mean that the cost-price problems of established products are not important. But in situations where rapid advances in technology are taking place, the life of the firm is often dependent on concentrating its most creative talents on the successful introduction of *new products*. Insufficient attention has been directed to the critical importance of the innovating entrepreneur and the factors which influence his major decisions. We have been too much concerned with local tactics and not enough with over-all strategy.

The major problem, in fact, for any company which wishes to prosper where scientific progress dictates the pace of change is to *be in* on the new developments or to *get in* at the proper time. For industries where products or processes are likely to be rendered obsolete in ten years or even less, a useful theory of economic development will have to be based on the dynamics of technological advance.

In analyzing an industry, therefore, I think it important to ask the following questions: (a) Are major advances occurring in the sciences underlying the industry?; (b) Is engineering art in close touch with and contributing to these advances?; (c) Is the economic organization of the industry conducive to innovation?; (d) Is capital freely available for radical new developments?; (e) Do the entrepreneurs possess the requisite skills for successful innovation?

I should like to try out these questions on the radio industry, and to center the analysis on the period from 1890 to 1912, when commercial wireless first came into being and had its early growth.

³ Involving successively ship-to-shore service, wireless telephony, short-wave communications, entertainment broadcasting, portable radios, FM and television.

I. *The Underlying Sciences and the Birth of the Radio Industry*

The radio industry was a direct outgrowth of a revolution in the science of physics and its applications to the study of electricity. In the first half of the nineteenth century a succession of brilliant physicists in various countries opened up a whole new conception of the nature of electricity which had been puzzling man for centuries.

Radio communication was only one small aspect of this total field, but it sprang directly from the work of the scientists. Progress with "the wireless" was at first exceedingly slow for two main reasons. First, there were other more important and more obvious aspects of electricity to be examined, leading to such applications as the dynamo, the electric motor, the electric lamp, the telegraph and the telephone. Secondly, there were comparatively few individuals devoted to the advancement of engineering art. New ideas and suggestions frequently lay unexplored for several decades. Thus it was fifty years after the original suggestion that radio waves might exist before the first wireless company was launched.

In 1846 Michael Faraday at the Royal Institution in London delivered a lecture called "Thoughts on Ray Vibrations," in which he suggested somewhat vaguely that electro-magnetic waves might be propagated in space. In 1864 James Clerk Maxwell, a brilliant mathematical physicist at King's College, London, building on such hypotheses and the laws of Ampère, published his famous *Dynamical Theory of the Electro-Magnetic Field*.

Maxwell was a theoretical physicist and not an experimentalist. Twenty-two years after his formulation of the theory of electro-magnetic induction, and forty years after Faraday's original suggestion that ether waves existed, Professor Heinrich Hertz in Germany proved their existence by experiment.⁴

Hertz designed a spark-gap oscillator which would generate wireless waves, a metallic mirror for reflecting them, and a loop type of antenna for detection. By such means he was able to send and receive signals from one end of his laboratory to the other without an interconnecting wire.

Following Hertz, scientists in various countries turned their attention to wireless communication. None of these early pioneers were consciously thinking about commercial developments. Rather they were exploring a new phenomenon of nature because it was not yet fully understood.

The other key scientific discovery on which modern radio is based is

⁴ Hertz was acquainted with the work of Faraday and Maxwell, but he was also influenced by the parallel continental explorations in electricity of Ampère, Gauss, Weber, von Helmholtz and others.

the thermionic vacuum tube. Thermionic emission of electrons was explored originally as a separate problem of physics with no thought of its ultimate value for the detection of electro-magnetic waves. This research came to a climax with the work at the University of Cambridge of J. J. Thomson and especially of his pupil, O. W. Richardson, who finally worked out the theory of thermionic emission of electrons from hot filaments. It was on top of this scientific work that de Forest introduced his three-electrode vacuum tube as a wireless detector.

Without the pioneer work of the university physicist, the practical development of radio communications would have been impossible. Marconi himself did not have the background in experimental physics which would have led him to make the discoveries of Hertz. His main scientific contribution was in improving the laboratory type apparatus of his predecessors and making it perform much more consistently.

II. The Relationship between Fundamental Science and Engineering Art

The growth of the engineering profession has made a radical difference in the speed with which new scientific discoveries are translated into commercial practice. The principal emphasis during the nineteenth century, both in this country and abroad, was in training a limited group of *scientists* rather than a large number of professional *engineers*. Germany was an exception to this rule and was the first country to pioneer in engineering education. The American engineering school began to expand rapidly after the Civil War, but until the twentieth century our schools were inadequately financed and considerably less scientific than their German counterparts.

The principal contributors to electrical invention in the United States in the 1870's and 1880's were men like Thomas A. Edison and Alexander Graham Bell, who were largely self-taught. By 1900, however, electrical engineering departments had been established in a considerable number of universities, and streams of young men were beginning to flow into industry who combined some basic training in science with an intense interest in practical applications. This meant that several of the leading electrical concerns were acquiring a sufficient supply of trained engineers to be capable of shortening the time-lag between the scientific discovery of wireless and its commercial applications.

III. The Organization of the Electrical Industries in 1900 and Their Contributions to Wireless

By the 1890's rapid scientific progress was being made toward understanding the propagation and detection of electro-magnetic waves. Referring to this work, the British physicist, William Crookes, wrote in 1892:

Here is unfolded to us a new and astonishing world, one which is hard to conceive should contain no possibilities of transmitting and receiving intelligence.

Rays of light will not pierce through a wall, nor as we know only too well, through a London fog. But the electrical vibrations of a yard or more in wavelength . . . will easily pierce such mediums, which to them will be transparent. Here, then, is revealed the bewildering possibility of telegraphy without wires, posts, cables or any of our present costly appliances.

This is no mere dream of a visionary philosopher. All the requisites needed to bring it within grasp of daily life are well within the possibilities of discovery, and are so reasonable and so clearly in the path of researches which are now being actively prosecuted in every capital of Europe that we may any day expect to hear that they have emerged from the realms of speculation to those of sober fact.⁵

If Crookes' predictions were to come true, they would have a profound effect on the telegraph, cable and telephone industries and on electrical manufacturing. Yet the established companies in electrical communications failed to envisage this new field.

What were the leading American companies doing at the turn of the century, when Marconi launched his first wireless company, and why did they not, in fact, take part in this new development? In 1900 Western Union, Postal Telegraph and the American Telephone and Telegraph Company were all flourishing enterprises in electrical communications; and General Electric, Western Electric and Westinghouse were important producers of electrical equipment. From the standpoint of economic organization, these related industries were in a favorable position to exploit a new method of communication. There was a sufficient "degree of monopoly" to support research and new projects and yet enough competition to provide a stimulus to innovation.

A. *The Telegraph and Cable Industry*

The most powerful of all the electrical companies was Western Union. The telegraph industry had experienced a spectacular rise since the Morse company was founded in 1845. In 1902 Western Union, operating over 1,000,000 miles of telegraph lines and two international cables, reported gross revenues of \$29,000,000. Postal, though considerably smaller, had 266,000 miles of telegraph lines; and its affiliate, Commercial Cable, owned four cables with gross earnings of \$10,000,000.

The telegraph industry, however, had failed to visualize the potential importance of the telephone, and by 1900 was beginning to feel the

⁵ William Crookes, "Some Possibilities in Electricity," *London Fortnightly Review*, Feb., 1892, Vol. LI, p. 173.

competition of this alternative method of communication which it cou¹ have controlled.

The managements of both Western Union and Postal were apparently more interested in buying up competitors and making protective agreements than in the fundamental development of communications. Western Union had been willing to withdraw from the telephone field in 1879 in exchange for Bell's promise to keep out of the telegraph business. And in the case of radio, it was not until the new industry was thoroughly established that the telegraph companies gave serious consideration to its potentialities. Neither Western Union nor Postal employed many trained engineers in 1900; they had no plans for the development of a separate research department to keep them abreast of scientific advances.⁶ As a one-time Postal Telegraph executive of this period expressed it, "We were *telegraph* men, and we did not think about alternative methods of communication."⁷

B. *The Telephone Industry*

The American Bell Telephone Company was probably the most research-minded concern in the communications industry and the best equipped to appreciate "the new and astonishing world" that William Crookes saw unfolding. Alexander Graham Bell had started an experimental workshop in Boston in 1876; and when he ceased working actively on the telephone, the laboratory was continued as a center for research and the development of patents. Trained men were also added in other divisions; and by 1901 there were 125 engineers and technicians employed in the various technical departments of the telephone system.⁸

However, wire telephony was in such an early and vigorous growth period that it kept this talent fully occupied. The basic Bell patents had expired in 1893 and 1894; and a number of small concerns had begun to expand into new regions not yet reached by the Bell system. Although the American Telephone Company continued to control the most densely populated and lucrative sections of the country, it was facing vigorous competition from the independents.⁹ At the close of the year 1902 there were 1,317,000 Bell-owned stations and 1,054,000 independently owned stations. The Telephone company was primarily concerned with acquiring undisputed national supremacy; its scientific energies were absorbed in developing central switchboards and increasing the distances that might be covered by its long-lines division.

⁶ Interview with E. J. Nally, November, 1946. Western Union did not establish its first real "laboratory" until 1916.

⁷ Nally interview. Mr. Nally later became general manager of American Marconi.

⁸ F.C.C. *Proposed Report*, Telephone Investigation, 74th Congress, Pursuant to Public Resolution No. 8 (Washington, Supt. Docs., 1938), p. 206.

⁹ No less than 508 new independent telephone systems were established in the year 1900.

C. *The Electrical Manufacturing Industry*

Just as Western Union, Postal Telegraph, and the American Bell Telephone Company were the principal concerns in the communications industry, so also a few firms produced the major portion of electrical apparatus. Although the electrification of the household had only just begun, the electrical-equipment industry had a volume of sales of nearly \$100,000,000 in 1900.

The largest and most powerful concern was General Electric, formed in 1892 as a merger of the Thomson-Houston and Edison companies. The focus of research attention at GE was on alternating and direct currents,¹⁰ motors, dynamos and lamps. There was so much to be accomplished in these fields in which the companies had a substantial stake that no consideration was given to radio and electronics. This was to come later when a broad research program had been established.

And even today in the best industrial research laboratories, like that of GE, it is not possible to cover all aspects of knowledge relevant to the company's interests; new approaches are often neglected for want of a sponsor, either in the laboratory or among the operating executives.

For these various reasons, the *established* electrical companies played no part in the early developmental phases of the American radio industry. This advance was to come from new concerns and new capital.¹¹

It should be said in passing that a policy of waiting for new developments to prove themselves is frequently justified. Proper timing is of crucial importance in the exploitation of a new invention. Thus, General Electric's Owen D. Young, who was responsible for the formation of the Radio Corporation of America in 1919, declared: "Fifteen years is about the average period of probation, and during that time the inventor, the promoter and investor, who see a great future for the invention, generally lose their shirts. Public demand even for a great invention is always slow in developing. That is why the wise capitalist keeps out of exploiting new inventions."¹²

As we shall see, of the early exploiters of wireless, de Forest and Fessenden did "lose their shirts" and Marconi came very close to doing so.

IV. *The Availability of Speculative Capital for New Ventures*

What rôle did venture capital play in launching the radio industry in this country? The three most important early American concerns were the American Marconi Company, the National Electric Signaling Com-

¹⁰ Steinmetz, for example, formulated a mathematical system for solving problems of alternating current distribution.

¹¹ Cf. Schumpeter: "It is not the owner of stage coaches who builds railways."

¹² G. Archer, *History of Radio to 1926* (New York, American Historical Company, 1938), p. 94.

pany (NESCO), and De Forest Wireless Telegraphy Company. The American Marconi Company was financed by investment bankers in England and the United States; its stock was largely privately subscribed and held in substantial blocks. NESCO, financed entirely by two wealthy Pittsburgh capitalists, conducted the first experiments made by any commercial company on the wireless telephone. The De Forest Wireless Telegraph Company, which was sold by high-pressure salesmanship as an out-and-out speculation, later went into receivership; but its principal inventor, Lee de Forest, made one of the most revolutionary inventions of the last fifty years—the three-element vacuum tube. Very few of our modern developments in electronics would have been possible without de Forest's historic discovery of the tremendous increase in sensitivity that can be obtained by introducing a third element between the cathode and the anode of a vacuum tube.

These three companies, therefore, were financed with different types of capital: American Marconi with investment money, NESCO with long-term speculative money of wealthy individuals, and de Forest's company with "get-rich-quick" money from many small investors. The Marconi investment ultimately proved very profitable, NESCO broke even, and de Forest failed. But the fact that all types of capital were readily available for financing new ventures contributed materially to advancing radio technology.

Not only inventive talent and venture capital were needed for the success of these new scientific enterprises. The most important ingredient was entrepreneurial skill. The nature of this skill and its relation to invention need special elaboration.

V. *The Quality of Entrepreneurial Leadership*

A. *Marconi*

Guglielmo Marconi was not a highly trained scientist. Educated in Italy primarily by tutors, Marconi early developed an absorbing interest in physics and chemistry. When he was twenty (1894), he read for the first time in an Italian electrical journal of the work and experiments of Hertz.¹³ Marconi's imagination was stirred by the possibility of making wireless communication a practical reality. Two large rooms at the top of his parents' villa were set aside for experiments, and there young Marconi worked almost constantly on perfecting home-made radio equipment. By the beginning of 1896, Marconi was receiving Morse code messages over a distance of nearly two miles. There was no outstanding originality in this work, which had been anticipated by many scientists, but it was very competent and thorough.

¹³ B. L. Jacob and D. M. B. Collier, *Marconi, Master of Space* (London, Hutchinson, 1935), p. 24.

As Marconi's family had wealth, there was no practical necessity for him to earn a living. He was swept into wireless experimentation with an irresistible inner compulsion, and his persistence, to the exclusion of almost all other interests, was perhaps the principal reason for his phenomenal success. There was also a certain *narrowness* about Marconi which seems to be characteristic of many successful entrepreneurs. His career bears out a conclusion of Benjamin Franklin: "I have always thought that a man of tolerable abilities may work great changes, and accomplish great affairs among mankind, if he first forms a good plan, and, cutting off all amusements or other employments that would divert his attention, makes the execution of that same plan his sole study and business."

Marconi was also greatly aided by his family connections. His mother was of the Irish aristocracy and moved in the "best circles" in England. The family concluded that Guglielmo would have a better chance to commercialize his inventions there than in Italy. A visit was arranged in 1896, and the young inventor (then twenty-two) was introduced to government officials and capitalists who might be interested in the radio field. Among these officials was William Preece,¹⁴ engineer-in-chief of the British Post Office. He took a keen interest in Marconi, and planned a demonstration for the post-office engineers. Marconi, who had been steadily improving the workmanship of every part of his equipment, showed that messages could be sent up to eight miles. This success and the interest displayed by Preece led to the formation of the British Marconi company in 1897.

Two years later an American subsidiary was launched. From then until the formation of the Radio Corporation of America in 1919, the Marconi companies were the dominant concerns in British and American wireless.

The original capital of the British Marconi company (£100,000) was subscribed largely by wealthy individuals who wanted a speculative investment in the new wireless venture. The company had a distinguished directorate; and, considering the fact that Marconi himself was only twenty-three at the time, the terms were exceptionally favorable. Marconi obtained £15,000 in cash and 60 per cent of the original stock in exchange for almost all of his patent rights.¹⁵

The technical obstacles to the commercial transmission of wireless messages proved much more difficult than Marconi anticipated. Immediately after his company was formed, Marconi began experimenting

¹⁴ Preece himself was an inventor of distinction who had worked on inductive wireless telegraphy.

¹⁵ He reserved to himself his patents in Italy and her dependencies. Marconi testimony, Marconi Wireless Telegraph Company of America *vs.* De Forest Radio Telephone and Telegraph Company, U.S.D.C., S.D.N.Y., in Equity 8211.

with long-distance communications. He decided to erect an experimental station in England and one in Newfoundland, 1,700 miles away. His receiving station was on a high bluff beside the ocean. On the twelfth of December, 1901, he flew a kite with wires connecting it to the receiving station, and was able to hear faintly a signal of the Morse telegraphic letter "S" transmitted from England.¹⁶

Despite this initial success and the excellent backing that Marconi received, the Marconi enterprises were to go through a very trying period. The company soon began to feel the opposition of the vested interests in the cable and the telegraph lines. Marconi's apparatus was far from perfected; for long distances, communication by cable remained much more reliable.

Development of Ship Communications

Marconi soon realized that his company would not survive if it relied primarily on international communications. A more promising field for exploitation seemed to be communication with ships. This proved to be a very significant move and illustrates the principle that *the most profitable outlet for an innovation is frequently not the one which is explored first*.

Marconi's plans for marine wireless were ambitious. He hoped to control the basic patents in the art, and to equip ships of all nations with wireless apparatus. He hoped also to erect shore stations at key points around the world, through which all ship messages would be sent. In the pursuit of these objectives, Marconi was determined to obtain a monopolistic position. Although he succeeded, his aggressive tactics created great antagonism. And yet, if one reviews carefully this period and the nature of the opposition, it seems probable that his aggressiveness was an essential element in his success.¹⁷

Despite Marconi's strenuous campaign to control ship-to-shore communications, his companies remained in financial difficulties until about 1910. Wireless was still regarded as a luxury for most ships, and the volume of traffic was scarcely sufficient to yield a return on the capital involved. The sinking of the *Republic* in 1909 and the *Titanic* in 1912 brought dramatic attention to the practical importance of wireless for safety of life at sea.¹⁸ From 1910 to 1912 laws were passed in the United

¹⁶ R. N. Vyvyan, *Wireless over Thirty Years* (London, Routledge, 1933), p. 29.

¹⁷ Cf. Aldous Huxley's statement that "as a matter of historical fact, scientific progressiveness has never been divorced from aggressiveness." *Ends and Means* (Harper, 1937), p. 23.

¹⁸ The *Carpathia*, which responded to the *Titanic's* SOS signal and rescued 700 survivors, was 58 miles away and did not reach the scene for several hours. Later it was discovered that a "dead ship"—a freighter without wireless—had passed within 25 miles at the time the *Titanic* sank, and that the *Californie* was less than 20 miles away but her wireless operator had retired for the night.

States, England and other maritime countries requiring all ships above a certain size to carry wireless.

This legislation gave a substantial boost to radio. The position of the Marconi company was also materially strengthened by the fact that its principal American rival—United Wireless (originally a De Forest company)—went into bankruptcy in 1912, and its assets were acquired by Marconi. United Wireless had been found guilty of infringing the Marconi "four sevens" patent and the Lodge tuning patent.¹⁹ American Marconi thus gained control of the 400 ship installations and 17 land stations belonging to its competitor. This gave it almost "all the coast stations of importance on the Atlantic and Pacific coasts, besides practically the whole of the American Mercantile Marine at present fitted with wireless installation."²⁰ The result was that the company carried on about 90 per cent of the American ship-to-shore business between 1912 and the outbreak of war in 1917.²¹ And from 1912 on, the company enjoyed increasing prosperity (see Table I).

TABLE I.—MARCONI WIRELESS TELEGRAPH COMPANY OF AMERICA
INCOME AND EXPENSES, 1903-1918

Year Ending	Organization Expenses and Deficit Account	Net Income after Taxes	Depreciation and Reserves	Net Profit
Jan. 31, 1903	\$ 35,468	Deficit	—	—
Jan. 31, 1904	85,183	Deficit	—	—
Jan. 31, 1905	168,843	Deficit	—	—
Jan. 31, 1906	257,475	Deficit	—	—
Jan. 31, 1907	384,804	Deficit	—	—
Jan. 31, 1908	422,422	Deficit	—	—
Jan. 31, 1909	448,803	Deficit	—	—
Jan. 31, 1910	445,102*	\$ 16,637	\$ 12,936	\$ 3,701
Jan. 31, 1911	—	9,405	11,126	1,721 (d)
Jan. 31, 1912	—	26,499	11,261	15,238
Jan. 31, 1913	—	242,235	30,989	211,246
Dec. 31, 1913 ^b	—	211,484	33,233	178,251
Dec. 31, 1914	—	271,889	122,011	149,877
Dec. 31, 1915	—	288,995	111,678	177,317
Dec. 31, 1916	—	336,041	76,152	259,889
Dec. 31, 1917	—	780,592	162,820	617,773
Dec. 31, 1918	—	897,325	286,516	711,842*

* The cumulative deficit was written off in 1911 and 1912.

^b For eleven months.

^c Includes \$101,033 described as "other income."

Source: Annual Reports, Marconi Wireless Telegraph Company of America.

^a See Annual Report of the American Marconi company for the year ending January 21, 1912, pp. 4-5.

^{*} Annual Report, 1913, p. 5.

²¹ Testimony of Vice-President Nally in 1918 before the Committee on Merchant Marine and Fisheries in the House hearings held on HR13159 for government control of radio.

Marconi's contributions to the commercialization of wireless made him more important as an innovator than as an inventor. Yet the Marconi company acquired, in wireless patents, a dominant position which far exceeded any of its rivals. Marconi applied for patents on everything he did; and he was the first worker in the field whose interest was in *practical* wireless telegraphy. His principal patents were on improved types of vertical antennas, on the improved coherer, on the magnetic detector and on methods of selective tuning. The "coherer" illustrates the way Marconi was able to obtain a strong position without doing the fundamental work. Professor Edouard Branly patented the coherer but did not conceive of its use for wireless.²² Professor Oliver Lodge used it first for radio reception but did not feel that he had made an invention and did not apply for a patent. Marconi improved the coherer and was able to get the basic patents for its use in wireless.

Sir Ambrose Fleming, long a close associate of Marconi, probably had Marconi in mind when he wrote:

Invention consists in overcoming the practical difficulties of the new advance, not merely talking or writing about the new thing, but in *doing it*, and doing it so that those who come after have had real obstacles cleared out of their way, and have a process or appliance at their disposal which was not there before the inventor entered the field. In most cases, however, the removal of the obstacles which block the way is not entirely the work of one person. The fort is captured only after a series of attacks, each conducted under a different leader. In these cases the inventor who breaks down the last obstruction or leads the final assault is more particularly associated in the public mind with the victory than are his predecessors.²³

Marconi's principal weakness was that he emphasized the perfecting of existing methods instead of reaching out for radically new discoveries in wireless. Although this may occur in any research organization, there is more danger of it where the director takes a restricted scientific view of the functions of his company. Marconi's intense drive for the rapid commercialization of wireless produced a number of blind spots, the most serious of which was his failure to visualize continuous-wave operation in transatlantic working, and in turn the significance of radio *telephony*. No one, of course, foresaw the development of the radio broadcasting industry. But there were many of Marconi's contemporary inventors who believed in the wireless telephone. Marconi thought that the Morse code was adequate for communication with ships and for transoceanic messages and saw no clear need for voice transmission.

²² Lodge first conceived of using the Branly coherer as a wireless detector and is credited with giving it the name "coherer." O. E. Dunlap, *Radio's 100 Men of Science* (New York, Harper, 1944), p. 76.

²³ J. Ambrose Fleming, *Principles of Electric Wave Telegraphy* (London, Longmans, Green, 1906).

Since his approach was pragmatic, he was not interested in the scientific investigation of a field whose commercial possibilities seemed remote. This was unfortunate, both for the Marconi company and for the advancement of the art. The early experimentation with the radio telephone was left almost entirely to Marconi's American rivals, Lee de Forest and Reginald Fessenden, neither of whom had at his disposal the managerial skill of the Marconi enterprises. In fact, the most difficult ingredient to supply in the new industry proved to be *effective management*.

B. *Reginald Fessenden*

Professor Reginald Fessenden of the University of Pittsburgh was the first important American inventor to experiment with wireless. In December 1900, Fessenden gave a demonstration for the United States Weather Bureau in which he tried to transmit *speech* by electro-magnetic waves, using two masts 50 feet high and one mile apart. He used spark apparatus which was not satisfactory for voice transmission; but the Weather Bureau was so interested that work on a larger scale was planned and some of it completed. However, Fessenden had a choleric personality; his relations with the Bureau soon became so strained that he resigned—the final break precipitated by a quarrel over patent rights.

Fessenden then succeeded in interesting two Pittsburgh capitalists—Hay Walker, Jr., and Thomas R. Given—in forming the National Electric Signaling Company to support his work on wireless telegraphy and telephony. It was now clear to the inventor that speech transmission would require a train of continuous waves, on which the voice currents could be superimposed, rather than the spark apparatus used hitherto.

Nikola Tesla, a Yugoslav physicist, had first conceived the idea of transmitting continuous waves and had pioneered in high-frequency alternators in the 1890's, but he was not successful in his radio experiments. Fessenden, taking up where Tesla left off, was more persistent. He was convinced that eventually he could design apparatus capable of carrying telephone conversations between America and Europe. His first high-frequency alternator was built to his specifications by Steinmetz of the General Electric Company in 1903. This was a 10,000 cycle machine and did not prove sufficiently powerful to transmit over long distances. Thereafter, Fessenden pressed for apparatus of higher and higher power.

It was to take years before an alternator capable of regular voice broadcasts across the Atlantic was developed by Alexanderson of the General Electric Company. In the end, however, the continuous-wave methods were to triumph over the spark.²⁴ But many of the leading en-

²⁴ There were also parallel developments of high-frequency alternators by the Germans.

gineers in the industry, especially those associated with the Marconi enterprises, remained skeptical until they actually saw the demonstrations of the Alexanderson equipment.

Fessenden was much more effective as an inventor than as an innovator. The National Electric Signaling Company never proved successful as a business venture. Launched as an inventor's laboratory, neither manufacturing nor commercial communications were contemplated. Fessenden was to be given an opportunity to experiment with wireless and to make inventions which it was hoped would be sufficiently basic and sweeping so that the Fessenden system could be sold at a substantial profit to a wireless operating company.

The establishment of an inventor's laboratory, with relatively broad scientific objectives and somewhat remote commercial prospects, was not a rare occurrence at this time. It was the era of the individual inventor; and wealthy business men in the United States were surprisingly willing to finance talent even when the inventors showed very little business judgment. The imagination of the business community had been stirred by the potentialities of an age of electricity. The courts were generous in their interpretation of patent rights, and the rewards for backing an Edison or a Graham Bell had proved spectacular. A high percentage of these scientific ventures were failures. Yet this did not discourage capitalists from underwriting new inventors, nor investors from buying stocks in wildcat promotions.

The backers of Fessenden—Walker and Given—were men of substantial means who believed that wireless was on the verge of a great development and that an investment in a laboratory and experimental stations would prove highly profitable.

On December 11, 1906, Fessenden gave a demonstration of radio telephony from Brant Rock to Plymouth, Massachusetts—a distance of eleven miles. Following these tests, Walker and Given tried hard to sell out to some existing firm. American Telephone and Telegraph, Western Union, and Postal were approached. The Telephone executives showed considerable interest, and an engineering investigation was ordered. The original report was favorable and optimistic. Chief Engineer Hayes, in transmitting it to President Fish, concluded: "I feel that there is such a reasonable probability of wireless telegraphy and telephony being of commercial value to our company that I would advise taking steps to associate ourselves with Mr. Fessenden if some satisfactory arrangement can be made."²⁵

Powerful Goldschmidt alternators for transatlantic communication were installed at Sayville, Long Island, in 1912 and at Tuckerton, New Jersey, in 1914. On the West Coast the Federal Telegraph of California began installing a series of high-power Poulsen arcs in 1911. The Poulsen arc had been invented in Denmark in 1903.

* Memorandum of April 2, 1907 (files of Telephone company).

But in 1907 a change of banking control of the Bell Telephone Company from Boston to the Morgan-Baker banking interests of New York,²⁶ led to the replacement of President Fish by Theodore N. Vail. The study of the Fessenden wireless matter was continued now under the new regime with much greater skepticism, and the final decision was negative.

In the succeeding years the relations between Fessenden and his backers steadily deteriorated. Fessenden was an exceedingly difficult person. And from what evidence is available, neither Walker nor Given possessed a great amount of tact or managerial skill. Quarrels were continuous, and finally an open break occurred. The Pittsburgh capitalists came to feel that Fessenden was no longer working for their interests. As they had put in all the money, they notified Fessenden in January 1911, of his dismissal. Fessenden then brought suit for breach of contract, won his case in the lower court and was awarded damages of \$400,000. To conserve assets pending an appeal, receivers were appointed for NESCO in 1912.

Walker and Given had overrated the commercial potentialities of Fessenden's inventions, failing to recognize that there were many alternative methods of perfecting radio communications. They also made the common mistake of underestimating the time required to develop a new industry to the point of mass production. No one was willing to pay large sums for patents as long as the manufacture of radio apparatus remained primarily a specialized engineering job in which very few standard units were produced. Not until after the first World War could the Fessenden system be sold for a price at all commensurate with research and development expenses.

The experiences of Walker, Given and Fessenden illustrate the difficulties inherent in launching a scientific enterprise when the men who put up the money do not understand technical problems and when, as is so frequently the case, the key inventor has a troublesome personality.

C. Lee de Forest

Lee de Forest, the most prominent of the American radio inventors, is primarily distinguished for the three-element vacuum tube or triode. Dr. Rabi, who recently won the Nobel Prize in physics, has described the triode as "so outstanding in its consequences that it almost ranks with the greatest inventions of all time."²⁷ De Forest was one of the

²⁶ Memorandum of October 28, 1947, sent to the author by Lloyd Espenschied of the Bell Telephone Laboratories. A large block of convertible bonds had been issued in the fall of 1906, a sizeable portion of which proved to be not readily marketable and were taken at a discount by the Morgan-Baker banking interests.

²⁷ I. I. Rabi, "The Physicist Returns from the War," *Atlantic Monthly*, Oct., 1945, p. 109.

first Americans to write a Ph.D. thesis on wireless telegraphy.²⁸ On graduation in 1899 he got a job with the Western Electric Company in Chicago, where he devoted all his spare energy and most of his "company time" to developing wireless apparatus of his own:

March 18, 1900. Experiments on my new wireless "Responder," as I then called it, began to occupy more and more of my time. My work on telephone tests and devices was never brilliant, to speak charitably, for my thoughts were ever elsewhere. Dean became progressively more impatient with my work, but was too considerate to fire me, although he saw little of merit or promise in the experiments I was wrapped up in. Certainly he saw no possibility that the great Western Electric Company would ever become interested in Wireless Communication! One day he exclaimed: "Look here, de Forest. You'll never make a telephone engineer. As far as I am concerned you can go to hell, in your own way. Do as you damn please!" With typical recklessness I took him at his word, turned to my little corner where I had my spark gap and responder parts, and thereafter spent eight hours a day at my own delectable tests, totally oblivious to the telephone work going on about me and for which I was supposed to be paid.

September 3, 1900. I am starting in a new job with poor pay. But I am on the right track and feel that it is destined to make me independent.

Nights I worked with partner Smythe in my room, on the Responder. Without much delay I got a job as assistant editor on the staff of the *Western Electrician*. Salary was \$10 a week. Every night not spent in the library was devoted to experimenting with the electrolytic anticoherer. Smythe was comparatively rich, earning \$30 a week. Naturally, our budget for experimental work was very limited. . . .

October 28, 1900. I have begun to hazard my job with the *Western Electrician* by working half-time in the laboratory of Armour Institute, teaching two nights weekly at Lewis Institute. I am risking mediocrity (sic) and weak contentment for a chance of great success. . . . Soon the experiments became so engrossing that it was impracticable for me to continue to work even half time for the *Western Electrician*. So once more I crossed the Rubicon, burned my bridges, and with only the amount of \$5 paid by Lewis Institute per week, and an equal amount advanced by Smythe, determined to continue my life as an inventor. . . .²⁹

De Forest's first chance to demonstrate his wireless apparatus came in 1901 with an offer from the Publishers' Press Association, which was willing to pay him \$800 if he could successfully report the International Yacht Races. The trial was a failure.

De Forest had been able to borrow \$1,000 to manufacture his equip-

²⁸ "The Reflection of Short Hertzian Waves from the Ends of Parallel Wires," Yale University, 1899. Georgette Carneal, *A Conqueror of Space* (New York, Horace Liveright, 1930), p. 83.

²⁹ Excerpts from unpublished diary of Lee de Forest, George Clark Collection.

ment for the races, and later that year, through the sale of stock to the public, he got an opportunity to set up a laboratory of his own. He proved a prolific inventor. Between 1902 and 1906, he took out 34 patents on all phases of wireless telegraphy, including loop antennas, receiver tuning, generators and antenna de-icers.³⁰

His major search was for a detector which would not infringe the Marconi or Fessenden patents. In 1900 he had noticed that the gas light in the laboratory dimmed while his spark equipment was operating, and that it returned to full strength when the apparatus stopped.³¹ This suggested that a gas flame might be used to detect wireless signals (later the dimming of the flame was shown to have been caused by sound waves from the spark gap). De Forest, therefore, tried to make a detector consisting of a bulb filled with gas and containing two electrodes intended to be heated by a dynamo. This gas detector was later described by the courts as "utterly useless."³²

However, it led to the invention that was to revolutionize the radio art.³³ Continuing to experiment with gas-filled and partially evacuated two-element tubes, de Forest placed a third electrode, called a grid, between the incandescent electrode (the cathode) and the cold electrode (the anode). He then attached a battery; and, by changing the voltage on the grid, was able to control the flow of current across the space between the hot and cold electrodes.

De Forest himself did not fully understand the principles of the triode. Despite his doctoral training, he was more an inventor than a scientist. He did not attempt to relate his experiments to the general literature of physics, and thus overlooked clues which might have assisted him in making a more reliable electronic device. His triodes were not uniform in performance and proved less satisfactory than other competing devices, such as the electrolytic, magnetic and crystal detectors.³⁴

Between 1907 and 1912 de Forest made few scientific experiments with the triode. He turned his attention primarily to wireless telephony, giving his first demonstration in the spring of 1907 between a Lacka-

³⁰ Carneal, *op. cit.*, p. 165.

³¹ This experience illustrates the oft-remarked role of chance observation in the process of invention. But as Pasteur declared, "Le hasard ne favorise que les esprits préparés."

³² Decision of the District Court, Marconi Wireless Telegraph Company of America *vs.* De Forest Radio Telephone and Telegraph Company, *op. cit.*, Sept. 20, 1916.

³³ U. S. Patent No. 879,532 was applied for January 29, 1907, and issued February 18, 1908. Lubell reports that it took de Forest three weeks to raise the \$15 necessary for the patent application. Samuel Lubell, "Magnificent Failure," *Saturday Evening Post*, Jan. 24, 1942, p. 36.

³⁴ While inherently superior to other detectors, de Forest's triodes needed such frequent adjustment that commercial users found them too bothersome.

wanna Ferry and the Hoboken and Manhattan terminals. Shortly thereafter the Navy installed de Forest sets on a number of ships; and, in the tests that followed, communication over twenty miles was achieved. But de Forest's company was inadequately financed, and the volume of radio sales was not large enough to sustain an effective program of development. When his laboratory was destroyed by fire in 1908, he took a year to re-equip it. Finally, in 1911, in order to earn a living, de Forest went to California to work for the Federal Telegraph Company, hoping still that some miracle would lift his firm from the economic doldrums. This never happened.

De Forest as an inventor lacked the persistence to carry any one project through to a completely successful conclusion. Like many highly creative individuals, he had far more ideas than he was capable of handling. And his restless mind was always seeking new fields to explore, in an apparently "irresistible urge to invent."³⁵

He would sweep down on a problem with a hungry rush and his imagination had an astonishing faculty for leaping difficulties. If the quarry snagged or proved elusive, however, he had to hop to something else.

When necessity did compel him to work at something without respite, his nerves rebelled. "The jumpees" de Forest called these attacks.³⁶

De Forest, like his American rival, Fessenden, had little of the entrepreneurial ability displayed by Marconi. De Forest's high inventive skill enabled him to launch a large number of companies, but none of these survived long. He seemed incapable of building on solid foundations an enterprise in which stable customer relations were cultivated.

Thus, although de Forest was perhaps the most imaginative inventor in the history of the radio industry, and had the opportunity to create a great radio enterprise, he failed entirely to do so. His career, when compared with Marconi's illustrates the fact that an inventor, to achieve commercial success, must associate himself with men of exceptional business judgment.

VI. Conclusions

A. The Rôle of Fundamental Science in the Process of Innovation

In analyzing an industry from the standpoint of technical progress, I suggested earlier that it was important to assess the status of the underlying sciences and to determine whether they were undergoing a major advance. The key rôle that can be played by a few outstanding scien-

³⁵ See Taussig, *Inventors and Money Makers* (New York, Macmillan, 1915), pp. 23-24. "The instinct of contrivance in man unlike the corresponding instinct in animals, is not directed to one specific end. . . . It is directed to all sorts of contrivances no longer restricted to those immediately serviceable. . . . There seems to develop an erratic streak."

³⁶ S. Lubell, *op. cit.*

tists exploring new lines of basic inquiry with imagination and freedom from routine could not have been demonstrated more clearly than in the pioneering work of Maxwell, Hertz, J. J. Thomson and others in laying the foundations of the modern radio industry.

And in the United States today, where our genius has lain more in applied research and engineering development, it is of critical significance to the process of innovation that we encourage a flourishing spirit of basic scientific inquiry.³⁷ Despite all the support that is now being given to science, there is real danger that research funds will be channeled primarily into applications in which prompt results can be expected. Original investigation into unexplored territory flourishes only in an environment where special efforts have been made to foster it.

B. Engineering Art and Fundamental Science

Science and the practical arts have advanced most rapidly when there has been a combination of diverse talents at work on a particular problem, the theorist positing the basic concepts, the experimentalist testing reality with the use of these tools and the inventor converting the results to practical achievement for the use of mankind.

Nineteenth-century industrialism encouraged the universities in Europe to undertake fundamental scientific inquiry.³⁸ And by 1900 there was a sufficient number of trained engineers interested in direct applications to translate the findings of the scientists into a vital new industry. It was not, however, the engineers in the well-established electrical concerns who seized the opportunity afforded by this new field. Instead, young men like Marconi, de Forest and Fessenden undertook the major risks of pioneering.

I hope that I have succeeded in recapturing the spirit of optimistic and zestful inquiry which characterized the activities of these men. I have tried also to show how they built on the foundations laid by the scientists. But if one were to criticize these inventor-engineers, it would be that they did not keep in *close enough touch with science*. De Forest did not really understand the principle of the triode which prevented him from making it into an effective commercial device. And Marconi's major blind spot was his failure to visualize radio communications as an advancing art in which Morse-code spark telegraphy would inevitably be replaced by continuous-wave voice transmission.

³⁷ For an elaboration of this point see V. Bush, *Science: the Endless Frontier* (Washington, Government Printing Office, 1945); and the author's "Federal Support for Scientific Research," *Harvard Business Review*, Spring, 1947, pp. 385-396.

³⁸ Maxwell's chair at Cambridge, for example, and the Cavendish Laboratories over which he presided, were founded in response to a demand from industrial leaders that the teaching of science be modernized.

C. *The Relation of the Structure of the Industry to Innovation*

During the first decade of the twentieth century the leading concerns in the electrical industry had achieved a sufficient degree of monopoly to be financially capable of expanding into a new area.

A monopolistic position can affect entrepreneurs in different ways. In most instances, I think, American business leaders have been conscious of the "perennial gale of competition." The response frequently has been to get in on new developments through vigorous support of research and engineering. For example, the General Electric Company established a laboratory for fundamental research as early as 1901 and under the leadership of Willis R. Whitney built up a remarkable team of scientists. And at a later stage both General Electric and the Telephone company made a whole series of exceedingly important contributions to radio science and art. Yet in the early 1900's the managements of these two forward-looking concerns concluded, as a matter of business judgment, that the time was not ripe for vigorous exploration of wireless telegraphy.

Western Union and Postal Telegraph, by contrast, took a different view. They chose to protect their established field by agreements rather than the support of research. The danger of this practice, when the underlying sciences are undergoing a revolutionary change, is that the well-protected field will eventually become of minor significance. And this in fact happened both to the telegraph and to the cable.

The telegraph and cable companies did their best to prevent Marconi from getting a franchise in Newfoundland. Somewhat later, Austen Chamberlain, as postmaster-general of Great Britain, saw the Marconi company primarily as a potential competitor of the government controlled telegraph industry and adamantly refused to connect the Marconi overseas service with the post office telegraph lines. But the opposition was overcome with time and no one could prevent Marconi from developing ship-to-shore communication, which was a new and hitherto unexploited field.

The attitude of monopolists toward new developments remains ambivalent today. There are many companies which behave as Schumpeter suggested when he wrote: "The first thing a modern concern does as soon as it feels that it can afford it is to establish a research department, every member of which knows that his bread and butter depend on his success in devising improvements."³⁹

But the joker here is the word "modern." There are monopolistic enterprises, particularly among the older industries, whose research or-

³⁹ Schumpeter, *Capitalism, Socialism and Democracy*, p. 96.

ganization (if it exists) is largely window dressing and where there is in fact no genuine interest in radically new products.

I do not personally believe that it is possible to predict how monopolists will behave toward a new development except in the light of the institutional background of the company and the personal characteristics of its principal executives. Frequently, I suspect, the reaction depends more on the personalities of the key entrepreneurs than on the formal organization of the industry. This was borne out, for example, by the different attitude of President Fish and President Vail of the Telephone company toward the wireless telephone.⁴⁰ And it should also be stressed that even under President Fish it was not Western Electric⁴¹ which backed de Forest nor the Bell Telephone Company which financed Fessenden's early experiments. This support came from new concerns and new capital.

D. *The Relation of Venture Capital and New Companies to Innovation*

There were almost no barriers to speculative investment in the period under review. In fact, with de Forest it was remarkable how readily he succeeded in getting a series of individuals to back him in enterprise after enterprise which ended in failure. The inventor of the early 1900's, if he had almost any kind of an idea, and was a good salesman, could raise money for a new venture. Of the seeds sown in this fashion there was a high percentage of bankruptcies but a few spectacular successes. This ready flow of funds was important; for new companies were of critical significance in the early history of radio.

And what of today? Is it still important to have new firms arise to take risks in unexplored areas?

Since the turn of the century our well-established industries have made great strides in their capacity to contribute to the advancement of science. The modern industrial research laboratory has made it possible for the large concern to move much more freely into new fields. Yet I think it will be unfortunate if the translation of scientific advances into new products and new industries is left entirely to the great corporations. Any large, well-established institution almost inevitably tends to become somewhat bureaucratic. It develops fields of special interest; and no matter how hard it tries to be receptive to new ideas, the radical notion and the new risk-taking approach are not always exploited. We can expect our great industrial corporations to take substantial risks and to be very forward-looking in many areas. But some

⁴⁰ Vail was put into office by the New York bankers because he was considered to have "sounder" business judgment than Fish and he was much less interested in "visionary" new developments. Nonetheless, basic telephone research developed vigorously and effectively under Vail's leadership.

⁴¹ A subsidiary of the American Bell Telephone Company since 1881.

of the less obvious developments which are off the beaten track, and which are in the highly speculative stage where their potentialities cannot be visualized, are still likely to be neglected.

In the days when American Marconi and NESCO were launched, many wealthy individuals were willing and able to put capital into new ventures; with tremendous increases in taxation the number of such individuals has dwindled rapidly. At the same time, the large corporation is in a much more dominant position to restrict entry into its field. This suggests that special efforts must be made to ensure a flow of capital into new enterprises.⁴²

E. *The Role of Entrepreneurial Leadership in Innovation*

Our review of early radio history has also served to stress the importance of specialized entrepreneurial skills in the successful launching of new ventures. The principal characteristics required were perhaps visionary boldness, "narrowness," aggressiveness, persistence, business judgment, salesmanship, the capacity to pick able associates, the delegation of authority and the ability to inspire loyalty in a working organization. This is an unusual collection of skills for any one man to possess—which presumably explains why there are not more innovating entrepreneurs. De Forest and Fessenden were highly imaginative inventors, but their lack of other skills led to their failure as innovators.

No case has come to my attention in the history of the radio industry in which very high inventive talent and the capacity for successful innovation were combined in one man. There have been such cases, of course, in other industries (e.g., Thomas Edison);⁴³ but it is apparently a rare phenomenon. Successful invention seems normally to require intensive application to the problem which is being tackled, to the temporary exclusion of all other considerations; it is an egocentric activity which, for those gripped by it, is all-absorbing. De Forest and Fessenden were such men. When de Forest was working on a new invention, everything else was forgotten. He burned with an intense flame, and his success seems to have been a product of brilliant imagination and intense application. The pace was so energy-consuming that he could not maintain it for long. And during his periods of creative productivity the commercial aspects of his enterprises were completely neglected. Moreover, de Forest had far more ideas than he was capable of handling. And both he and Fessenden were gamblers, willing to risk everything on their particular interest of the moment.

Marconi, in contrast, succeeded because he was much shrewder

⁴²The recent establishment of the American Research and Development Corporation is an important forward step in this direction.

⁴³Though Edison was more successful as an inventor than as an innovator.

(and incidentally less creative), of a more equitable temperament and capable of delegating the formulation of commercial policy to skillful business associates. He did not, however, learn for some years how to select his associates and to delegate authority; and his enterprises nearly ended in failure during the learning process.

But while all three of the inventor-entrepreneurs whom we studied lacked some of the important qualities of entrepreneurial leadership, they all possessed a capacity for visualizing important new scientific developments. I believe that the careers of such men are particularly worthy of study because we have entered an era in which radical innovations are likely to be much more intimately connected than in the past with advances in the frontiers of knowledge. The challenge of the second industrial revolution in which we are now living is to make certain that in every industry there is the maximum possible encouragement to explore new lines of endeavor with imagination and freedom.

Although we have come a long way since Marconi's time toward more "informed entrepreneurship,"⁴⁴ there has yet to emerge a class of "scientific entrepreneurs" who are attempting to apply the latest advances in the physical and social sciences to the solution of their problems. This will be difficult because some of the success of an inventor-entrepreneur like Marconi was due to his "narrowness." And yet this limited vision inhibited him from appreciating the critical importance of the wireless telephone—which was perhaps his major error.

I should expect that the scientific entrepreneur of the future will be recognized and rewarded for his capacity to "be in on new developments" *at the proper time*. The handling of innovations will be regarded as his major task, and he will require a specialized staff to keep him informed on the underlying forces affecting the various aspects of his enterprise. The determination of cost-price relationships on existing products will be delegated primarily to subordinates. And, if he is to make use of economic analysis, new tools must be forged for his basic needs.

⁴⁴ I have borrowed this term from Arthur Cole.

ECONOMIC IMPLICATIONS OF THE RAILWAY CLASS RATE CASE

By ROBERT W. HARBESON*

The decision of the Interstate Commerce Commission in what is commonly referred to as the Class Rate Case reorganized the existing freight classifications and class rate structure of the country, and in terms of its economic, legal and political implications is, in the writer's judgment, one of the most important decisions rendered by the Commission in its sixty-two year history. The Commission's decision was rendered on May 15, 1945 and upon appeal was upheld by the Supreme Court on May 12, 1947.¹ Before considering some questions of theory and policy presented by this decision it may be desirable, for the benefit of non-specialists in the field, to review a few facts with regard to the construction of freight rates and also with regard to the background and provisions of the decision in question.

I

Railway freight rates are of three types—class, exception and commodity.² Class rates are those the computation of which requires the use of both a freight classification and a freight tariff. The freight classification makes no mention of rates but groups practically all the commodities which move by rail into a limited number of classes for rate-making purposes. A class rate tariff, on the other hand, makes no mention of individual commodities by name but quotes rates in cents per 100 pounds between points or groups of points, applicable to each

* The substance of this paper was presented before the Mid-West Economics Association at St. Louis, April 22, 1949. The author is associate professor of economics at the University of Illinois.

¹ No. 28300, *Class Rate Investigation, 1939*; No. 28310, *Consolidated Freight Classification*, 262 I.C.C. 447 (1945). Supplementary decisions, 264 I.C.C. 41 (1945) and 268 I.C.C. 577 (1947). Hereafter referred to as the Class Rate Case. Upheld upon appeal, *State of New York et al. vs. U.S.* 65 Fed. Supp. 856 (1946); *State of New York et al. vs. U.S.*, 331 U. S. 284 (1947).

² Some students prefer to group railway rates under two headings, those which are based upon a freight classification and those which are not. The former would include class and exception rates, the latter commodity rates. See K. T. Healy, *The Economics of Transportation in America* (New York, Ronald Press, 1940), pp. 202-8. See also the *Class Rate Case*, *op. cit.*, p. 562. Another type of rate which is sometimes distinguished is the column rate. This is not, however, a distinct kind of rate but is simply an exception or commodity rate which is related to the first class rate scale by fixed percentages.

of the various classes in the freight classification. The rates applicable to classes other than first are related to the first class by established percentages.

Exception rates are modified class rates resulting from the use of exceptions to the freight classification. Exceptions transfer the ratings on specified commodities from one class to another in the classification or to some intermediate percentage column, or grant some favorable consideration with respect to packing requirements, carload minimum weights, etc., not enjoyed by regular class rate shipments. Originally, exception rates applied on individual lines and within limited areas but in recent years have also been given territory-wide and interterritorial application.

Commodity rates are quoted directly on specified commodities without reference to the freight classification. They may be of local or general application and most commonly are constructed on no systematic basis, but in some instances may be either percentages of the corresponding class rates or may be based on separate scales. Commodity rates are ordinarily lower than the corresponding class rates.

Class rates have been of relatively minor importance in the movement of carload traffic in recent years. This fact is revealed in a study made by the Interstate Commerce Commission, based on a one-day sample of waybills collected on September 23, 1942, which showed that on that day only 4.1 per cent of the carloads handled moved on class rates and 10.7 per cent on exception rates. In terms of carload freight revenue class rate traffic on that day accounted for 6.3 per cent of the total and exception rate traffic for 16.1 per cent.³ On the other hand, less-than-carload traffic, except in the South, moves predominantly on class or exception rates. A study made by the Association of American Railroads for the week of September 8-14, 1939, showed that for the country as a whole approximately 79 per cent of the less-than-carload traffic moved on class or exception rates.⁴ Less-than-carload traffic, however, constituted only 1.65 per cent of the tons of revenue freight originated in 1939.

There are five major freight rate territories, each with a different level and structure of rates. These are known, respectively, as Eastern or Official, Southern, Western Trunk Line, Southwestern and Mountain-Pacific territories.⁵ There are also three major freight classifications.⁶

³ *The Class Rate Case*, *op. cit.*, pp. 479, 564.

⁴ Board of Investigation and Research, *Transportation Act of 1940, Report on Interterritorial Freight Rates*, H. D. 303, 78th Cong., 1st Sess. (1943), p. 2. Hereafter cited as B. I. R., *Report on Interterritorial Freight Rates*.

⁵ Each of the five major territories has certain sub-divisions which are recognized in the class rate structure. In Official Territory there are New England Zone A (southern New England), New England Zone B (northern New England) and Michigan Zone C (northern

The Official classification applies in Eastern Territory, Southern classification applies in the South, and Western classification in the remainder of the country. While there is a high degree of uniformity in the less-than-carload ratings in the three classifications, diversity is the rule in the case of the carload ratings. Likewise, the class rate structures in the major rate territories differ from one another in the number of classes, the percentage relations of the lower classes to first class, the levels of the basic first-class scales and the rates of progression of these scales as lengths of haul increase.

A study made in 1943 by the former Board of Investigation and Research, established under the Transportation Act of 1940, showed that the scale of first-class rates in the South averaged 39 per cent higher than the Eastern Territory first-class scale and that the first-class scales in Western Trunk Line, Southwestern and Mountain-Pacific territories were from 28 to 84 per cent higher than in the East.⁷ This comparison is grossly misleading, however, because of the great differences in the relative importance of class rate traffic in the various territories. The Interstate Commerce Commission's 1942 waybill study, referred to above, showed that while 23.3 per cent of the carload traffic in Eastern Territory moved on class or exception rates, the corresponding percentages in the other territories ranged from 0.8 per cent to 7.8 per cent. Thus, in all the territories except Eastern, class rates are little used and nearly all the carload traffic moves on lower commodity rates. A study made by the staff of the Interstate Commerce Commission concluded that the average revenue level in 1939, based on all kinds of rates and corrected for differences in lengths of haul and other factors, was from 3 to 5 per cent higher in the South than in the East and from 16 to 17 per cent higher in the West than in the East.⁸

II

With the foregoing facts regarding the rate structure in mind it will be desirable next to review briefly the considerations which eventually

Michigan). In Southern Territory the Florida peninsula is a sub-territory. Western Trunk Line Territory is divided into four zones for rate-making purposes. As stated in the text, the permanent adjustment in the class rate case calls for a single class rate scale in place of all existing territorial and sub-territorial class rate scales, except in Mountain-Pacific Territory. There are also three subdivisions of Official Territory with different levels and structures of commodity rates. These are New England Territory, Trunk Line Territory (extending as far west as a line from Buffalo to Pittsburgh) and Central Freight Association Territory (comprising the portion of Official Territory west of Buffalo-Pittsburgh line).

⁷ There is also an Illinois Classification, which applies intrastate in Illinois and has a limited interstate application between Illinois and some points in Wisconsin and Indiana.

⁸ B.I.R., *Report on Interterritorial Freight Rates*, *op. cit.*, pp. 20, 56, 57.

⁹ B.I.R., *Report on Interterritorial Freight Rates*, *op. cit.*, p. 153.

led to the recent notable revision of freight classification and territorial rate structures in the Class Rate Case. In the interest of brevity, these factors will merely be enumerated without elaboration.

First, the continuous increase in the average length of freight hauls, based upon the cheapening of transportation and the parallel development of mass production industries geared to a national market, have greatly increased the importance of interterritorial traffic.⁹ A study made by the Office of Defense Transportation, based upon an examination of waybills covering all carload freight originated on May 27 and September 23, 1942, showed that 26.3 per cent of the carload traffic originated on these two days moved interterritorially.¹⁰

A second factor, which concerned particularly the relationship between Eastern and Southern territories, was the process of railway consolidation in the East after 1900, whereby the major trunk lines absorbed nearly all the small independent roads which had an important stake in building up north and south traffic in connection with the lines in Southern Territory.¹¹ So long as there were independent roads in the East competition among them led to the making of numerous low interterritorial commodity rates which in large measure offset the handicap which the South would otherwise have by reason of its higher class rates and average rate level. By contrast, the eastern trunk lines were interested primarily in securing long east and west hauls and in fostering the interests of shippers on their lines against competition of shippers in other territories. Consequently, after absorbing most of the independent north and south roads in Eastern Territory, the trunk lines refused to continue the practice of building up north-and-south interterritorial traffic by means of low joint commodity rates, and the South began to feel severely for the first time the consequences of its higher class rates and average rate level.

In the third place, cost studies in recent years have not substantiated the long-held belief that territorial differences in rate levels were justified by differences in cost of service. Studies made by the staff of the Interstate Commerce Commission in 1930 and 1938, though having too many limitations to be conclusive, indicated that costs were slightly lower in the South than in the East and only moderately higher in the West than in the East, a result confirmed by the more reliable Edwards

⁹ See M. S. Heath, *The Uniform Class Rate Decision and Its Implications for Southern Economic Development*, *Southern Econ. Jour.*, Vol. 12, No. 3 (Jan., 1946), p. 213.

¹⁰ B.I.R., *Report on Interterritorial Freight Rates*, *op. cit.*, p. 4. Of the less-than-carload traffic originated on the two days only 15 per cent moved interterritorially.

¹¹ For further discussion see the excellent article by David M. Potter, "The Historical Development of Eastern-Southern Freight Rate Relationships," *Law and Contemporary Problems*, Vol. 12, No. 3 (Summer, 1947), pp. 416-48.

cost study in 1939.¹² Some portions of the data developed in the latter study are reproduced in Tables I and II.

TABLE I.—RELATIVE TERRITORIAL CARLOAD COST INDEXES, 1939 BASED ON 300 MILE HAUL
(Eastern including New England but excluding Pocahontas = 100)

	Based on Assumed Identical Load		Based on Actual Average Load	
	Out of Pocket Cost	Fully Distributed Cost	Out of Pocket Cost	Fully Distributed Cost
<i>Box Cars</i> (25-ton load)				
Eastern, including New England and excluding				
Pocahontas	100	100	100	100
Pocahontas	78	66	79	66
Southern	89	94	90	94
State of Kentucky	78	75	—	—
Southern excluding				
State of Kentucky	90	99	—	—
Western	94	106	93	105
<i>Gondola and Hopper Cars</i> (50-ton load)				
Eastern, including New England and excluding				
Pocahontas	100	100	100	100
Pocahontas	80	63	80	63
Southern	94	99	100	102
State of Kentucky	83	77	—	—
Southern excluding				
State of Kentucky	97	105	—	—
Western	95	109	106	115
<i>All Carload Traffic</i> (identical loads)				
Eastern including New England and excluding				
Pocahontas	100	100	100	100
Pocahontas	78	66	78	66
Southern	92	96	94	99
State of Kentucky	—	—	—	—
Southern excluding				
State of Kentucky	—	—	—	—
Western	94	106	96	108

Source: Adapted from *Class Rate Case, op. cit.*, pp. 577, 579. Fully distributed cost consists of the out-of-pocket cost plus a pro-rata apportionment of the constant costs. The 300-mile haul is taken as most closely approximating the actual average hauls in the three major territories in 1939.

¹² *Territorial Variation in the Cost of Carload Freight Service on Steam Railways in the United States for the Year 1928*, I.C.C. Bureau of Statistics, Statement No. 3018 (1930); *Territorial Variation in the Cost of Carload Freight Service on Class I Steam Railways*

TABLE II.—COMPARISON OF THE COST OF HAULING THE UNITED STATES, EASTERN, SOUTHERN, AND WESTERN CONSISTS OF TRAFFIC IN EACH OF THE SEVERAL TERRITORIES AT THE UNIT COSTS AND ACTUAL AVERAGE LOADS (BY CLASSES OF EQUIPMENT) COMPUTED FOR SUCH TERRITORIES, 1939
(United States average cost = 100)

Consist of Traffic	If Hauled at United States Average Costs	If Hauled at Eastern Costs*	If Hauled at Southern Costs	If Hauled at Western Costs
United States Consist	100	102	101	110
Eastern Consist*	100	101	101	111
Southern Consist	100	102	101	—
Western Consist	100	102	—	108

* Eastern includes New England but excludes Pocahontas.
Source: *Class Rate Case, op. cit.*, p. 581.

A fourth consideration has been the desirability of simplifying both the rate structure and the task of regulation. The rise of motor competition and, to a lesser extent, water and pipe line competition, has undermined the principle of discriminatory pricing embodied in freight classifications and has led to a widespread flight from class rates. The Interstate Commerce Commission's study of a one-day sample of waybills in 1942, previously referred to, showed that for the country as a whole class rates moved only 4.1 per cent of the carload traffic and that, except in Eastern Territory and in a few interterritorial movements the use of class rates was negligible. The resulting overwhelming reliance upon exception and commodity rates unnecessarily complicates the rate structure, opens the door to inequitable rate relationships and makes unnecessarily difficult the task of regulation. A further complication arises from the co-existence of through interterritorial class rates governed by a single classification and intraterritorial class rates governed by three different classifications.¹³ While simplification of the rate

in the United States for the Calendar year 1936, I.C.C. Bureau of Statistics, Statement No. 3812 (1938); *Rail Freight Service Costs in the Various Rate Territories of the United States*, Senate Doc. No. 63, 78th Congress, 1st Sess. (1943). For a summary and discussion of these studies see B.I.R., *Report on Interterritorial Freight Rates, op. cit.*, Chap. 9.

¹³ "From a practical standpoint, unification of ratings would remove serious complications, encountered in border areas where classification territories adjoin, in connection with through interterritorial rates governed by one of the classifications. So long as there were no such rates, particularly class rates, as was predominantly the situation before 1928, differences between the classifications presented comparatively few tariff problems, because the through rates were made by combining rate factors to and from the territorial gateways, and the application of a rating to one factor different from that governing the other caused little difficulty. But the advent of interterritorial class rates, governed by a single classification, created complicated tariff problems, numerous instances of undue prejudice and preference, departures from the long-and-short haul and aggregate of intermediates provisions of section 4 of the act, and rates different in opposite directions between the same points.

"The situation gave rise to many complaints, required the granting of relief from section 4, called for the prescription of the rates in effect in one of the territories as the minimum

structure cannot be pushed very far because of probable undesirable reactions upon the volume of traffic, a single classification and a class rate scale which would move a substantial proportion of the total traffic would help to eliminate unnecessary complexities in both the rate structure and the task of regulation.

Fifth, the Class Rate Case was a logical and necessary outgrowth of a series of decisions by the Interstate Commerce Commission between 1925 and 1938 which brought about the establishment of uniform percentage relationships between the classes in each of the three classifications and the establishment of unified class rate scales on a distance basis within the various territories and of both distance scales and key rates for interterritorial class rate traffic.¹⁴ However, in the Commission's words, "The nature and sequence of these proceedings did not permit a simultaneous harmonization or integration of the several intra-territorial class-rate structures."¹⁵ It remained for the Class Rate Case to deal with the question of the lawfulness of the relative levels of intra- and inter-territorial class rate scales.

Sixth, it is likely that the Class Rate investigation may have been undertaken in part in response to strong agitation by public bodies and shippers' organizations, especially in the South, against what they deemed to be an unreasonable and prejudicial class rate structure. While it appears that there had been occasional complaints concerning territorial class rate relationships, at least between the East and South, for many years, the period of concerted and widespread attacks dates from the early 1930's. One response to this discontent was the appearance of several studies by the research department of the Tennessee Valley Authority and by the Board of Investigation and Research, created by the Transportation Act of 1940, which were critical of existing territorial and interterritorial rate relationships.¹⁶ It may be noted in passing that two of the TVA studies were prepared under the direction of Mr. J. H. Alldredge, who later as a member of the Inter-

basis, and necessitated the resort to supplementary distance scales of rates in order to avoid excessive differences between intra-territorial rates to border points and interterritorial rates to points just beyond the border." See the *Class Rate Case*, *op. cit.*, pp. 503-4.

¹⁴ *Southern Class Rate Investigation*, 100 I.C.C. 513 (1925); *Consolidated Southwestern Cases*, 123 I.C.C. 203 (1927); *Western Trunk Line Class Rates*, 164 I.C.C. 1 (1930); *Eastern Class Rate Investigation*, 164 I.C.C. 314 (1930); *Lake and Rail Class and Commodity Rates*, 201 I.C.C. 101 (1935); *Western-Southern Class Rates*, 266 I.C.C. 497 (1938). There were one or more supplemental reports in each of the foregoing cases.

¹⁵ *The Class Rate Case*, *op. cit.*, p. 688.

¹⁶ The TVA studies are: *The Interterritorial Freight Rate Problem of the United States*, H.D. 264, 75th Cong., 1st Sess. (1937); *Supplemental Phases of the Interterritorial Freight Rate Problem of the United States*, H.D. 271, 76th Cong., 1st Sess. (1939); *Regionalized Freight Rates: Barrier to National Productiveness*, H.D. 137, 78th Cong., 1st Sess. (1943). For complete citation of the Board of Investigation and Research Study, see *supra*, note 4. For another criticism see *First Annual Report of Federal Coordinator of Transportation*, Senate Doc. No. 119, 73rd Cong., 2nd Sess. (1934). p. 29.

state Commerce Commission actively supported the Commission's action in the Class Rate Case.¹⁷

On another front the Department of Justice and the State of Georgia sought to bring about a revision of the existing rate structures indirectly by attacking the rate bureau machinery used by the carriers in initiating rates as being in violation of the antitrust laws.¹⁸ The controversy also spread into political channels. A number of bills were introduced into Congress in 1939 providing for the establishment of interterritorial rates on the basis prevailing in the destination territory, thereby favoring those who shipped from the higher rate level South and West to the lower rate level East.¹⁹ Following the publication of the Report on Interterritorial Freight Rates by the Board of Investigation and Research in 1943 no fewer than sixteen bills calling for the establishment of a uniform classification and class rate structure were introduced into the 78th Congress, none of which, however, became law.²⁰ Meanwhile, the Interstate Commerce Commission in various cases, notably the so-called Southern Governors' Case of 1939, reduced the rates on a number of commodities moving from the South to Eastern Territory substantially to the level prevailing in the latter area.²¹

¹⁷ It is also worthy of note that the attorney for the Southern Governors' Conference has been quoted as saying that, in his opinion, had it not been for the efforts of Commissioner Alldredge it was very doubtful whether the Commission would have taken the position which it did in the Class Rate Case. See R. A. Lively, *The South in Action: A Sectional Crusade Against Freight Rate Discrimination* (Chapel Hill, Univ. of North Carolina Press, 1949), p. 81.

¹⁸ *U.S. vs. The Association of American Railroads, et al.*, 4 F.R.D. 510 (D.C. Neb., 1945); *State of Georgia vs. the Pennsylvania R.R. Co., et al.*, 324 U.S. 439 (1945). The latter suit is now being heard before a special Master appointed by the Supreme Court. The status of both suits is now uncertain in view of the passage on June 17, 1948, of the so-called Bulwinkle bill, whereby rate bureau activities were placed under the supervision of the Interstate Commerce Commission and, to the extent approved by the Commission, are exempted from the operation of the antitrust laws. See Public Law 662, 80th Cong., 2nd Sess.

¹⁹ See *Hearings*, 76th Cong. 1st Sess., on Senate Res. 99, Senate 126, Senate 137, Senate 1483, Senate 158, Senate 1299, Senate Joint Res. 27.

²⁰ For a list of these bills and of others introduced into the 79th Congress, see R. A. Lively, *op. cit.*, pp. 63n, 64n, 65n.

²¹ *Brick and Clay Products in the South*, 88 I.C.C. 543 (1924); *American Distillery Co. vs. A.C. and Y. Ry.*, 140 I.C.C. 633 (1928); *Krupp Foundry Co. vs. Southern Ry.*, 148 I.C.C. 743 (1928); 156 I.C.C. 415 (1929); *Hosiery from Southern Points*, 156 I.C.C. (117) (1929); *Cullet in Southern Territory*, 169 I.C.C. 153 (1930); *Eastern Tanners Glue Co. vs. Southern Ry.*, 171 I.C.C. 213 (1930); *Stone, Marble and Slate from or to Southern Points*, 183 I.C.C. 611 (1932); *Muscle Shoals White Lime Co. vs. Akron and Barberton R.R.*, 205 I.C.C. 273 (1934); *Coke from Alabama and Tennessee to Central Territory*, 208 I.C.C. 281 (1935); 215 I.C.C. 384 (1936); *Sugar from Gulf Port Groups to Northern Points*, 234 I.C.C. 247 (1939); *State of Alabama vs. N.Y. Central R.R. (the Southern Governors' Case)*, 235 I.C.C. 255 (1939), 237 I.C.C. 515 (1940); *Alabama Byproducts Corp. vs. Ahnapee and Western Ry.*, 256 I.C.C. 649 (1943). In other instances rates from the South to the North were reduced so that they exceeded the northern level by 10 per cent or less. See the Class Rate Case, *op. cit.*, pp. 603-4.

Seventh, and finally, certain additions to the law made by the Transportation Act of 1940 presaged the Class Rate Case. One provision amended Section 3 of the Interstate Commerce Act to extend the prohibition against undue preference and prejudice to include "regions districts, and territories." The Commission interpreted this amendment as broadening the legal concept of discrimination to include regions, districts and territories as separate entities apart from individual shippers or localities within those areas. Another provision was a new Section 5(b) of the Transportation Act of 1940, directing the Commission to investigate the rates on manufactured products, agricultural commodities and raw materials within and between the classification territories to determine whether such rates were unreasonable or otherwise unlawful and to order the removal of any unlawfulness found to exist. The Commission notified Congress that the investigation leading to the Class Rate decision was to be considered as being a proceeding under this special legislation. The Commission also took note of a clause in the statement of National Transportation Policy in the Transportation Act of 1940, declaring the purpose of Congress to be "to encourage the establishment and maintenance of reasonable charges for transportation services without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices."

III

With the foregoing background in mind, the decision in the Class Rate Case may now be summarized. The Case consisted of two allied proceedings heard and submitted together. Both were investigations on the Commission's own motion begun in 1939, one relating to the freight classifications and the other to the various class rate scales. The findings were combined in a single decision which was in three parts. First, the carriers were directed to prepare a uniform classification for the entire country to replace the existing classifications. It is to have thirty classes ranging from four times first class to 13 per cent of first class, as compared with the seven to twelve classes of the present classifications. Second, a uniform class rate scale was prescribed to replace the existing class rate scales except in Mountain-Pacific Territory and between that territory and the rest of the country, and except as the present scales apply to rail-and-water coastal service or relate to arbitrarities for short and weak lines. This new scale was approximately 16 per cent above the Eastern Territory scale as it stood at the time of the decision, and was on a level about half-way between that scale and the average of the other then-existing territorial class rate scales. It is to take effect simultaneously with the adoption of the new uniform classification. Third, in order to bring about some degree of uniformity during the considerable period which will elapse pending the establishment of the

new rate scale and classification an interim order provided that class rates were to be increased 10 per cent in the East and reduced 10 per cent in the other territories and interterritorially.

Before analyzing the decision, it may be desirable first to review briefly the basic theoretical considerations involved in the regulation of rates. Broadly speaking the issue is the same as that of free trade versus protection in the international field. One policy calls for a level and structure of transportation rates which would be consistent with an allocation of resources between industries and regions according to competitive pricing principles. The other policy calls for rates which would assist in the attainment of so-called social welfare objectives, such as the decentralization of industry and population for military or other reasons, the promotion of regional self-sufficiency as against territorial specialization, assistance to those types of industry or agriculture regarded as important in particular regions, and the like. The first policy calls for rates equated as nearly as possible to the marginal cost of transportation service for all commodities and hauls; the other policy disregards considerations of cost in so far as necessary to attain the stated objectives.

The policies of the Interstate Commerce Commission with respect to rate regulation have not been completely consistent, and it is unlikely that much consideration has been given to the broader theoretical implications of the alternative policies. However, the Commission's decisions have harmonized predominantly with the first of the foregoing policies, though with important exceptions. Probably the principle consideration preventing complete reliance upon the competitive price principle is that this principle precludes resort to rate discrimination of any type, whereas under conditions which ordinarily prevail in the railway industry, rate discrimination according to the value of service principle is essential in order to secure full utilization of plant and the economies of scale, and thereby the lowest unit cost of service. Likewise, it has not been found feasible to adhere to the competitive price principle in the policies adopted with respect to the strong-and-weak road problem.

The permanent adjustment provided in the Class Rate Case, if it succeeds in developing the expected increase in the proportion of class rate traffic, will materially assist in bringing about a location of economic activity in harmony with competitive pricing principles. It will do so in two ways: first, by removing territorial differences in class rate scales not justified by differences in cost of service, and, second, by replacing the three territorial classifications with a single classification. By way of explanation of the latter point it may be noted that although the rate discrimination implicit in the freight classification interferes with a competitive allocation of resources as between industries, the use

of a single classification helps to remove the geographical distortion in the development of a given industry which may result when different regional classifications are used.

On the other hand, the Class Rate Case departed from strict adherence to cost standards in two respects. First, the evidence showed that over-all costs in the West were from 6 to 10 per cent higher than in the East, excluding the Pocahontas Region, depending upon the consist of traffic used in making the comparison, and were as much as 15 per cent higher than in the East in the case of traffic moving in gondola and hopper cars (see Tables I and II). There is room for reasonable difference of opinion as to whether a difference in cost of this amount should be reflected in territorial rate levels, especially since greater differences in cost within each of the territories are ignored. The point need not be pressed, however, in view of developments subsequent to the decision. A revision of the Interstate Commerce Commission's cost data as of January 1, 1948 reveals that the costs in the East, excluding Pocahontas, are markedly higher than in the South and West, a situation reflected in the larger increases in rates prescribed for the Eastern than for the other districts in the recent increased rate cases²² (see Table III). However, as will be explained below, future changes in

TABLE III.—RELATIVE TERRITORIAL CARLOAD COSTS AS OF JANUARY 1, 1948—BASED ON 300 MILE HAUL AND ACTUAL AVERAGE LOADS FOR EACH TYPE OF EQUIPMENT AND ACTUAL AVERAGE WEIGHT TRAINS IN THE RESPECTIVE TERRITORIES
(Eastern district costs = 100)

Type of Equipment	Out of Pocket Cost ^a				Fully Distributed Cost			
	Eastern District*	Pocahontas Region	Southern Region	Western District	Eastern District*	Pocahontas Region	Southern Region	Western District
Box	100	64	79	78	100	62	83	85
Flat	100	57	71	67	100	56	77	75
Gondola and Hopper	100	67	93	95	100	63	95	98
Tank	100	74	91	98	100	69	92	100
Stock	100	57	66	91	100	56	70	93
Refrigerator	100	70	93	79	100	68	93	83

* Eastern District includes New England and excludes Pocahontas.

Source: Computed from Rail Carload Costs, By Territories As of January 1, 1948, Interstate Commerce Commission, Bureau of Accounts and Cost Finding, Statement No. 3-48, November 1948.

^a *Ex Parte No. 148 Increased Railway Rates, Fares, and Charges, 1942, Ex Parte No. 162 Increased Railway Rates, Fares, and Charges, 1946, 264 I.C.C. 695 (1946), 266 I.C.C. 537 (1946); Ex Parte No. 166, Increased Freight Rates, 1947, 270 I.C.C. 93 (1948), 270 I.C.C. 403 (1948); Ex Parte No. 168, Increased Freight Rates, 1948, 272 I.C.C. 695 (1948).* In the last of the above proceedings the increase within the East, within the South and between the East and South was 6 per cent as compared with 4 and 5 per cent on other traffic.

territorial cost relationships may give rise to a difficult question of policy.

A second respect in which the decision departed from cost standards was in failing to make provision for continuing the higher rate levels prescribed earlier for New England, Northern Michigan and the Florida peninsula to reflect the higher cost of service in those areas. The provision of a scale of arbitrariness to supplement the uniform class rate scale for movements in the foregoing areas would have promoted to a greater degree than does the rate structure actually prescribed a location of economic activity in harmony with the principle of comparative advantage. It should also be recalled in this connection that the decision did not integrate the class rate structure of Mountain-Pacific Territory with that of the rest of the country.

Apart from the foregoing there remain several obstacles to the achievement of a rate structure in complete harmony with competitive pricing principles. First of all, the structure of exception and commodity rates would have to be revised on principles similar to those followed with respect to class rates.²³ Such a step would, however, be likely to provoke intense opposition because it would remove the remaining protectionist features of the territorial rate structures. Important interests in the South objected to the equalization of class rates partly because this step removed some of the protectionist features of the Southern rate structure but principally because they foresaw that it would be a precedent for further action in the same direction.²⁴ The majority of the Commission in the Class Rate Case admitted that proper weight would have to be given to "the fact that an important percentage of both intraterritorial and interterritorial traffic is transported at exception or column rates which might be affected if class rates are substantially changed."²⁵ Nor did they deny the charge of dissenting Commissioner Porter that "if a general cost study such as the one upon this record can be and is used as the vehicle for forcing uniformity in class rates, the same study can and probably should be used as an excuse for

²³The adoption of a uniform classification will of itself reduce in some measure the present territorial differences in the structure of exception rates.

²⁴See the *Class Rate Case*, *op. cit.*, p. 615. See also D. P. Locklin, "Can Existing Regional Differences in Class-Rate Levels be Justified?", *Law and Contemporary Problems*, Vol. 12, No. 3 (Summer, 1947), pp. 505-6. The protectionist features of the Southern rate structure have been enumerated as follows: relatively low intraterritorial rates on raw materials shipped to southern factories, relatively low interterritorial rates on southern manufactures, relatively high interterritorial rates on southern raw materials and semi-processed commodities (thereby giving additional protection to southern manufactures), low interterritorial rates on raw materials and supplies from the North to the South, and high interterritorial class rates applied primarily to shipments of northern manufactures into the South. See Heath, *op. cit.*, p. 233.

²⁵*The Class Rate Case*, *op. cit.*, p. 570.

forcing uniformity in all rates, exception and commodity rates included."²⁶ Although the Commission may hesitate to act because of the magnitude of the task and possible political repercussions, the writer believes that ultimately it will and should undertake a revision of exception and commodity rates, not only to remove the protectionist features of the rate structure but also to maintain carrier revenue and to eliminate instances of undue preference and prejudice in relation to traffic moving on the new class rates.

Second, in order to bring about a localization of economic activity in harmony with competitive pricing principles the pattern of exception and commodity rates, like that of class rates, would have to be substantially uniform throughout the country.²⁷ Such a pattern of rates would, however, conflict with the attainment of another desirable objective of regulation, namely, the attainment of full utilization of plant and the economies of scale and hence the lowest unit cost of service. This is because the kind and degree of discrimination necessary to attain the latter objective varies with the consist of traffic and the degree of unutilized capacity, and there are significant variations between the carriers in the different territories in both of these respects.²⁸ Hence, if a uniform pattern of class rates is to be established throughout the country the variety and flexibility in rate structures necessary to attain full utilization of plant and economies of scale will have to be secured by means of regional variations in the pattern of exception and commodity rates at the expense of some distortion in the geographical development of particular industries.

Third, even though a geographical development of economic activity in harmony with competitive pricing principles should be attained by the establishment of a uniform pattern of class, exception and commodity rates discrimination between commodities would remain and

²⁶ *The Class Rate Case, op. cit.*, p. 719.

²⁷ Except, of course, rates on traffic in one territory for which there is no counterpart in the other territories.

²⁸ This is not, of course, a defense of the existing territorial differences in the transportation burden, nor does it imply that a different territorial distribution is necessarily required as between class rate traffic as a whole and commodity rate traffic as a whole, or as between manufactured articles as a group and other commodities. Hence, it is not in conflict with the findings of the Board of Investigation and Research in its *Report on Interterritorial Freight Rates, op. cit.*, Chap. 10. After emphasizing that there was a high degree of uniformity in the rate structures within each of the rate territories despite the fact that the differences in both consist of traffic and traffic density as between roads within a given territory were far greater than the differences between the territories in these respects, the Board concluded that "it cannot be said that the lesser regional differences now existing require a different rate policy and different distribution of the transportation burden. This does not mean that complete uniformity in the rate structure is desirable, but merely that the present regional differences are not a necessary consequence of either differences in the composition of traffic or in density of traffic" (p. 309).

would interfere with a competitive allocation of resources as between industries in a given region. Yet it is elementary that under the conditions which ordinarily prevail in the railway industry discrimination of this type is essential to the attainment of full utilization of plant and the economies of scale and thereby the lowest unit cost of service. This difficulty has been considerably mitigated, however, by the impact of motor and other forms of competition upon railway rate making. As a result of this competition, weight-density and other cost elements now play a dominant rôle in freight classification, and so-called value of service considerations play a smaller part than formerly.²⁹ The problem might be solved by resort to government ownership and the adoption of the scheme proposed by Hotelling and others according to which rates would be equated to a marginal cost, and the fixed costs, to the extent that they are not covered by the rates, would be met by non-shiftable taxes.³⁰ This proposal, however, has difficulties and limitations of its own which cannot be taken up here.

Finally, as already noted, it has not been found feasible to adhere to the competitive price principle in the policies adopted with respect to the strong-and-weak road problem. Shippers having access to strong roads have been required to pay higher rates than would otherwise be required in order that shippers located on weak lines may be provided with adequate service. This problem can be and has been mitigated in some measure by the continuing process of reorganization and abandonment and, in some instances, by consolidation.³¹

IV

Before concluding this analysis of the Class Rate Case, two features of the Supreme Court decision upholding the Commission deserve a brief comment. These aspects of the Court's decisions have received little attention, at least from economists, although they are of great importance because of their bearing upon the permissible scope of the Commission's control over the rate structure.

²⁹ *The Class Rate Case, op. cit.*, p. 482.

³⁰ See A. P. Lerner, "Statics and Dynamics in Socialist Economics," *Econ. Jour.*, Vol. 47, No. 186 (June, 1937), pp. 253-70, and Harold Hotelling, "The General Welfare in Relation to Problems of Taxation and of Railway and Utility Rates," *Econometrica*, Vol. 6, No. 3 (July, 1938), pp. 242-69. For a criticism of the Lerner-Hotelling thesis see R. H. Coase, "The Marginal Cost Controversy," *Economica*, Vol. 13, N.S., No. 51 (August, 1946), pp. 169-82.

³¹ Consolidation is a solution only in those instances where it results in removing the causes of the weakness of weak lines, by providing them with important new traffic connections or other benefits. Consolidation is not a solution if it merely results in strong roads being allowed to earn more than necessary in order that a portion of the excess earnings may be used to enable weak roads to operate at lower rates than their cost conditions dictate, or to forestall the reorganization or abandonment of weak roads.

The first point is that the Court clearly established the Commission's authority to eliminate unjust discrimination by resort to section 15 of the Interstate Commerce Act without the necessity of first finding that the same carrier or carriers controlled the rates involved and were therefore able to remove the discrimination by their own action. Section 15 empowers the Commission, upon finding that a rate is unreasonable or unjustly discriminatory, to prescribe the reasonable rate or the maximum or minimum rates or both. This holding of the Court requires a brief explanation. Heretofore, in order to establish a finding of undue preference and prejudice under section 3 of the act, it was not sufficient merely to show that the localities concerned were competitive and that they were injured by a rate relationship which was inconsistent with the governing criteria of rate making. Under the doctrine of the so-called Ashland Fire Brick Case it was also necessary to show that the same carrier or carriers controlled both the allegedly preferential and allegedly prejudicial rates, in the sense of being able to alter the relationship by their own action.⁵² If the relationship resulted from the independent action of different carriers, no relief could be afforded under section 3. Consequently there were many instances of unjust discrimination which the Commission was powerless to eliminate under this section of the law.

The original reason for the Ashland rule was the Commission's lack of power to prescribe minimum rates. Where rates alleged to be unduly preferential or prejudicial were independently established by different carriers the Commission could reduce a rate found to be unjustly high but neither it nor the carrier whose rate was thus reduced could prevent the carrier controlling the other rate involved in the relationship from correspondingly reducing that rate and thus continuing an unjustly discriminatory relationship. It might be supposed that the grant of the minimum rate power in the Transportation Act of 1920 closed this gap in the Commission's authority, but such proved not to be the case. In a decision rendered soon after the passage of the latter measure the Supreme Court held that the scope and purpose of section 3 had not been changed.⁵³ Thus, in the eyes of the law discrimination continued to be defined not as a difference in rates unjustified by differences in transportation conditions but unequal treatment by the same carrier or carriers. This doctrine was a logical counterpart of the traditional

⁵² *Ashland Fire Brick Co. vs. Southern Ry.*, 22 I.C.C. 115 (1911).

⁵³ "Carriers can be held . . . responsible for unjust discriminations only if each carrier has participated in some way in that which causes the unjust discrimination . . . What Congress sought to prevent by that section (section 3), as originally enacted, was not differences between localities in transportation rates, . . . but unjust discrimination between them by the same carrier or carriers. Neither the Transportation Act, 1920 . . . nor any earlier amendatory legislation has changed, in this respect, the purpose or scope of section 3." *Central R.R. of N.J. vs. U.S.*, 257 U.S. 247 (1921) at p. 259.

view that in regulatory matters carriers should be dealt with as individual entities and that considerable latitude should be given the carriers in making competitive rate adjustments. However, as one writer puts it, "It must seem an irrelevant question to the shipper suffering under a high rate, whether or not the carriers serving both him and his more generously treated competitor are under common control,"³⁴ and it also seems anomalous that under the Act of 1920 the carriers should be treated as a whole or in large groups for purposes of preserving revenue while they continued to be treated individually in matters of discrimination.³⁵

Encouraged by what it interpreted as a shift in viewpoint on the part of the Supreme Court,³⁶ the Commission in several cases decided in the late 1920's attempted to deal with instances of discrimination which the Ashland rule, if strictly interpreted at least, would prevent it from reaching.³⁷ However, when the Supreme Court again passed upon this issue in 1933 it held that the Ashland rule was still controlling.³⁸

Despite this setback the Commission in the Albany Port Differential Case in 1936 again resorted to a broader interpretation of its power to control discrimination.³⁹ In rejecting the defense of the carriers that they could not be charged with discrimination because individually they were unable to alter the rate relationship involved in the complaint, the Commission expressed the view that the rate structure was not a "loose aggregation of separately established rates, but a single entity composed of interrelated rates," for which the carriers could be held collectively responsible.⁴⁰ It would appear that the effect of this holding is largely, if not completely, to nullify the Ashland rule. The Commission relied upon this decision to support its action in the Class Rate Case.

It was to be expected, therefore, that when the latter case was appealed to the Supreme Court it should be contended that the Commission's action violated the Ashland rule and hence was invalid. The

³⁴ H. C. Mansfield, "The Minimum Rate Power and the Control of Carrier Competition," *Yale Law Journal*, Vol. 45, No. 8 (June, 1936), p. 1411.

³⁵ I. L. Sharfman, *The Interstate Commerce Commission* (New York, The Commonwealth Fund, 5 vols., 1931-37), Vol. 3B, p. 634.

³⁶ *U.S. vs. Illinois Central R.R. Co.*, 263 U.S. 515 (1924); *C.L. and L. Ry. vs. U.S.*, 270 U.S. 287 (1926).

³⁷ *Galveston Commercial Assn. vs. G. H. and S. A. Ry. Co.*, 100 I.C.C. 110 (1925), 128 I.C.C. 349 (1927), 160 I.C.C. 345 (1929); *Oswego vs. B. and O. R.R. Co.*, 146 I.C.C. 293 (1928), 151 I.C.C. 717 (1929); *Duluth Chamber of Commerce vs. C. and N.W. Ry. Co.*, 156 I.C.C. 156 (1929); *Inland Empire Mfrs. Assn. vs. Abilene and Southern Ry. Co.*, 165 I.C.C. 53 (1930).

³⁸ *Texas and Pacific Ry. Co. vs. U.S.*, 289 U.S. 627 (1933).

³⁹ *Albany Port District Comm. vs. Ahnapee and Western Ry. Co.*, 219 I.C.C. 151 (1936).

⁴⁰ *Ibid.*, p. 172.

Court did not find it necessary to pass upon the merits of this contention, but merely held that where the Commission in seeking to remove unjust discrimination acted under section 15, the Ashland rule was not controlling.⁴¹ This holding was also defended as necessary to give effect to the 1940 amendment to section 3, which extended the prohibition against undue preference and prejudice to include regions, districts, and territories.⁴² Adherence to the Ashland rule would have prevented the Commission from dealing with most instances of this type of discrimination, since individual carriers could seldom be held responsible for the rate relationships involved. In the words of Mr. Justice Douglas:

If the hands of the Commission are tied and it is powerless to protect regions and territories from discrimination unless all rates involved in the rate relationship are controlled by the same carriers, then the 1940 amendment to section 3 (1) fell far short of its goal. We do not believe Congress left the Commission so impotent.⁴³

The result of this holding is to close an important gap in the Commission's power to control rate relationships. More fundamentally, it will probably result in greatly narrowing the latitude which has hitherto been given the carriers to compete for traffic by establishing rate relationships based upon value of service rather than cost-of-service considerations. Confronted with complaints of undue preference and prejudice arising from competitive rate making of this sort and no longer able to dodge the issue by invoking the Ashland rule, the Commission will almost inevitably be compelled to fall back upon cost comparisons in reaching its decisions. This increased reliance upon cost of service and the correspondingly reduced scope for competitive rate adjustments will have further important consequences. It will not only affect the fortunes of individual carriers and change the general pattern of economic development of the country but will also necessarily place the responsibility for these matters in the hands of the Commission to a far greater extent than formerly.⁴⁴

⁴¹ The Court has recently upheld similar action by the Commission under section 15 where the Ashland rule was again invoked and where the alleged discrimination was between individual localities within a region rather than between regions, as in the present case. See *Ayrshire Collieries Corp. et al. vs. U.S.*, 335 U.S., 573 (1949).

⁴² This holding has created some confusion and uncertainty concerning the Court's notion of what constitutes discrimination. It seems to imply that by the 1940 amendment to section 3 Congress established a new test or standard of discrimination, despite an explicit statement to the contrary by Justice Douglas earlier in his opinion. The matter is of little practical significance, however, in view of the free hand given the Commission in the present case to remove unjust discrimination by resort to section 15.

⁴³ *State of New York et al. vs. U.S.*, 331 U.S., 284 (1947), at pp. 342-43.

⁴⁴ The only important remaining limitation on the Commission's control of the rate structure, to the writer's knowledge, is the so-called rule of *Northern Pacific Ry. vs. North Dakota*, 236 U.S. 585 (1915). Under this decision the Commission may not require

The second important holding of the Court, which is closely related to the first, is an extension of the doctrine that the Commission may raise rates under the minimum rate power in order to remove unjust discrimination, even though the rates in question are compensatory and involve no threat of a rate war. The basis for this holding is the well established doctrine that there is a zone of reasonableness in the fixing of rates and that rates may be within such a zone and yet result in undue preference and prejudice.⁴⁵ This doctrine has been frequently applied in establishing relationships between individual rates and groups of rates, but so far as the writer is aware the present case is the first in which it has been applied to an entire territorial level of rates. The justification for applying this doctrine in the case of individual rates is the lack of an absolute standard of reasonableness in such instances, since the presence of joint and overhead costs makes the full cost of individual hauls indeterminate. In the case of an entire level of rates, however, cost of service does provide an absolute standard of reasonableness. Hence, in this instance resort to the relative standard implicit in the notion of a zone of reasonableness cannot be justified on the same grounds as when it is used in connection with individual rates. So far as the writer can determine, the use of this doctrine in rate level cases merely serves to rationalize a policy of protecting high cost lines or high cost areas.

Whether it was so used in the Class Rate Case is a question which divided both the Commission and the Supreme Court, but, as previously noted, in the light of subsequent developments the issue need not be pressed. However, the majority of the Court admitted that had the rate of return in the East been substantially above that in the South and West it could not have upheld the increase in rates which the Commission prescribed in the East, even in order to remove discrimination. It is not unlikely, therefore, that the issue between the absolute and relative standards of reasonableness will have to be squarely faced in some future rate level case. In short, the interregional approach adopted in the Class Rate Case may create a new rate-making problem—a strong-and-weak territory problem analogous to the strong-and-weak road problem, but with the addition of potentially explosive political complications.

There has been much speculation concerning the nature and extent

the establishment of rates which do not cover the out-of-pocket or assignable expenses plus a "fair apportionment" of the constant expenses other than return on capital. This is a higher minimum than the carriers in many instances find it profitable to establish voluntarily, and unduly limits the scope that may be given to the value of service principle in rate regulation.

⁴⁵ *U.S. vs. Illinois Central R.R. Co.*, 263 U.S. 515 (1924); *U.S. vs. Chicago, Milwaukee, St. Paul and Pacific R.R. Co.*, 294 U.S. 499 (1935).

of the influence which the Class Rate Case will have on regional economic development. Considerable uncertainty surrounds the answer to this question, partly because time is necessarily required for the new rate adjustment to work out its effects, but primarily because it is only one of a number of important factors shaping regional economic development. But, in the writer's opinion, there can be little doubt that two features of the decision, namely, the interregional approach to the problem of rate regulation and the heavy reliance upon cost evidence, will prove to be of great significance.

THE VARGA CONTROVERSY

By EVSEY D. DOMAR*

In another moment Alice was through the glass, and had jumped lightly into the looking-glass room.—Lewis Carroll: *Through the Looking-Glass*.

I

Soviet criticism of Varga's latest book—*Changes in the Economy of Capitalism Resulting from the Second World War*¹—has performed for it the services of a Boston Board of Censors. For three years the book has been discussed in the press and in the professional journals of several countries, and the whole controversy has gradually acquired the magnitude of a *cause célèbre*.

Academician Eugene S. Varga was born in Budapest in 1879 and studied at the Universities of Budapest (Ph.D., 1909), Berlin and Paris. Having joined the Hungarian Social Democratic party in 1906, he entered the short-lived Communist government of Hungary in 1919, first as the People's Commissar of Finance, and then as the chairman of the Supreme Economic Council. After the fall of the Communists he fled to Russia (via Austria) and became a member of the Russian Communist party in 1920. For many years he headed the Institute of World Economics and World Politics in Moscow and was the chief editor of its journal.² Varga has been a prolific writer, with more than a score of works to his credit; in addition, he has produced frequent articles and collaborated on books with others.³

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¹ E. Varga, *Izmenenija v Ekonomike Kapitalizma v Itoge Vtoroi Mirovoi Voiny* (Moscow, 1946). Throughout this paper it will be referred to as *Izmenenija*.

² For biographical sources, see *Bol'shaja Entsiklopedija* (Moscow, 1927), Vol. 8, pp. 792-93; *World Biography* (New York, 1948), p. 4827. (The latter source places Varga's birth in 1887, which differs from several other sources.)

³ There is duplication among his works, because some of them are collections of earlier articles, others have been translated, sometimes with changed titles, and in several instances the same essay or part of an essay appears in more than one book. Here are his more interesting works: *Die Wirtschaftspolitischen Probleme der Proletarischen Diktatur* (Petrograd, 1921; Russian translation, Moscow, 1922); *Plan Dauesa i Mirovoi Krisis 1924* (Moscow, 1925); *Problemy Mirovogo Khoziaistva i Mirovoi Politiki* (Moscow, 1929); *Mirovoi Ekonomicheskii Krisis* (Moscow, 1930); *Novye Iavlenija v Mirovom Ekonomicheskem Krisize* (Moscow, 1934); *Mezhdju VI i VII Kongressami Kominterna; Ekonomika i Politika 1928-34* (Moscow, 1935; English translation under the title *The Great Crisis and Its Political Consequences; Economics and Politics 1928-34*, published

His latest and now famous book was written in 1945-46 and published in September, 1946. Its appearance coincided with the sharp change in Soviet intellectual orientation which began at the end of the war, gained momentum with a speech delivered by the late A. A. Zhdanov at a public discussion of a seemingly innocent textbook on the *History of Western European Philosophy*,⁴ and soon spread to most other fields, such as biology, history, statistics, and, of course, economics. Varga's book was subjected to a public discussion in May, 1947, the majority of the participants denouncing it as anti-Marxist. Comments made in the press and in subsequent discussions were more biting. By the end of 1947, Varga's institute was merged with another, his journal was abolished, and he was relieved of his twin posts of director and editor.⁵ He refused to repent, however, and this impasse continued until the spring of 1949.

Several of Varga's previous works are available in English (see note 3) and a complete stenographic report of the May, 1947, discussion of his latest book has been translated by the Council of Learned Societies.⁶ The book itself, oddly enough, is not available in English. It has, however, been reviewed by Frederick C. Barghoorn in an interesting article which includes a chapter-by-chapter summary;⁷ another review article appeared more recently in *Soviet Studies*.⁸ We can, therefore, dispense with a systematic review of the book and concentrate on those parts of it, of Varga's other writings, and of the several discussions which may be of particular interest to American economists.

II

Varga's purpose in his last book, as stated in the preface, was to "decide which of these new phenomena [i.e., economic phenomena produced by

in London around 1935]; *Mirovoe Khoziaistvo 1937 Goda* (a collection of articles, Moscow, 1938); *Two Systems: Socialist Economy and Capitalist Economy* (New York, 1939; Russian and German editions published in 1938); and of course his latest book. Several formidable volumes, *Mirovye Ekonomicheskie Krisisy 1845-1935* (Moscow, 1937 and later), were published jointly by Varga and his colleagues.

⁴ G. F. Alexandrov, *Istoriia Zapadnoevropeiskoi Filosofii* (Moscow, 1946). Zhdanov's speech was made on June 24, 1947, and reported in *Bol'shevik*, No. 16 (August 30, 1947), pp. 7-23, and in *Voprosy Filosofii*, No. 1 (1947). See J. and M. Miller, "Zhdanov's Speech to the Philosophers: An Essay in Interpretation," *Soviet Studies*, Vol. 1 (June, 1949), pp. 40-51.

⁵ The new journal, *Voprosy Ekonomiki* (Economic Problems), which superseded Varga's *Mirovoe Khoziaistvo i Mirovaia Politika*, does list him on the editorial board.

⁶ *Soviet Views on the Post-War World Economy, An Official Critique of Eugene Varga's "Changes in the Economy of Capitalism Resulting from the Second World War,"* translated by Leo Grulio (Washington, 1948). It was originally published as a supplement to Varga's journal, *Mirovoe Khoziaistvo i Mirovaia Politika*, for November, 1947. All references in the present paper are to the Grulio translation, which for the sake of brevity will be named *The May Discussion*.

⁷ Frederick C. Barghoorn, "The Varga Discussion and Its Significance," *The American Slavic and East European Review*, Vol. 7 (Oct., 1948), pp. 214-36.

⁸ R. S., "The Discussions of Varga's *Changes in the Economy of Capitalism*," *Soviet Studies*, Vol. 1 (June, 1949), pp. 28-40.

war] are transitory and which are lasting. In other words, how will the capitalist economy develop after the war?" (p. 5) This is indeed an ambitious task, and in making his forecasts, Varga follows the method of neither the Delphic oracle nor of our Council of Economic Advisers: on the whole, his statements are reasonably clear, frequently specific as to date, and generally devoid of that lofty ambiguity which usually surrounds the pronouncements of these august bodies. Here is the essence of his predictions (Preface, Chaps. XIII and XV):

1. During the first decade after the war economic conditions will be a natural aftermath of the war itself.
2. The impoverished countries of Europe and Asia will suffer throughout the period from what he calls a "crisis of underproduction."
3. The United States, Canada and other countries whose productive capacities were greatly increased during the war will enjoy a short, two- to three-year prosperity after its end.
4. This short prosperity will be followed by a sharp crisis of overproduction, probably more prolonged than that of 1920-21.
5. When this crisis has been overcome, a new industrial cycle will begin. It will be not of the 1921-29, but of the 1929-37, type; i.e., its recovery will be incomplete. In its background there will be a sharp and prolonged agrarian crisis.

Thereafter things become less definite. Perhaps no economist (with the exception of Colin Clark) can be expected to forecast for more than a decade. A Soviet economist finds himself in a particularly difficult position: to say that after ten years capitalism will definitely meet its doom is not politically advisable, since workers may thus be discouraged from taking an active part in speeding up its end;⁹ but to predict that capitalism will survive much longer may sound needlessly pessimistic. So under the circumstances it is more advisable to express the more distant future in terms of the "general crisis of capitalism" caused by the "sharp contradiction between the unlimited drive of capital to expand and the narrow frame of society's ability to consume" (p. 269), and to let it go at that.

If the American reader finds Varga's forecast unduly pessimistic, he may recall that a number of those made in this country at the same time (1945-46) were even more so. Varga's earlier statements had likewise presented a much darker picture of our prospects.¹⁰ How correct Varga's latest predictions will turn out to be it is still too early to tell. But in any case, his analysis is at least as interesting as his results. On what basis did he reach these conclusions?

⁹ Varga was quite explicit on this. See his *Problemy Mirovogo Krizisa* (Moscow, 1932), pp. 38-39.

¹⁰ In 1940 he said: "We can say with assurance that the present imperialist war will throw the capitalist economy and capitalist production decades back and that capitalism will never again experience growth (except in the cyclical sense)." "Uchenie Lenina ob Imperializme i Vtoroia Imperialisticheskai Voina," *Mirovoe Khoziaistvo i Mirovaya Politika*, No. 4 (Apr.-May, 1940), p. 6. It should also be pointed out that the strength, as well as the duration, of our postwar prosperity greatly exceeded Varga's expectations. Among other things he had expected a fall rather than a rise in prices after the war.

Like most contemporary economists, be they Keynesians, Marxists or others, Varga analyzes the business cycle in terms of capital formation.

. . . While the process of real accumulation proceeds at full speed, while new factories and plants, blast furnaces, railroads are built, while old machines are replaced by new—so long prosperity lasts. As soon as this process reaches a degree of completion, as soon as a considerable part of the new productive apparatus has been produced, the demand for goods of Division I (building materials, machinery, etc.) immediately decreases, and this leads to a reduction in the demand for consumer goods as well, because workers of Division I become unemployed. At the same time the supply of goods rises, as the new and the rebuilt old plants and factories begin to throw goods on the market. . . .¹¹

This relationship between the prosperity phase of the cycle and capital accumulation is recognized by anyone familiar with the figures. But the basic question still remains: why does capital accumulation come to an end? This question has particular significance for a Marxist, who *must* show that for some inevitable reason capital formation comes to an end. Yet in Varga's writings a coherent and definite answer could not be found.¹²

The standard Marxian explanation concerning the inherent contradictions of capitalism which limit its power to consume reduces itself to the more modest, though more precise, statement that due to the appropriation of surplus value by capitalists (*i.e.*, due to the division of national income between capitalist and workers), a large, and evidently an increasing, fraction of total output is invested in constant capital (producer goods). By itself, this fact need not cause any trouble: Varga clearly recognizes the stimulating effects of investment (though he does not use the multiplier process as such). To make his point, that expansion *must* come to an end—and his theory cannot be complete without it—he must show that this accumulation of capital necessarily creates maladjustments which bring about its end. This he has failed to do.

We find instead several disconnected attempts to explain the downturn. In one of them Varga makes use of what is called the gestation period of investment:

. . . Capitalist accumulation is a double process. Up to a certain stage it is the lever of the cyclical rise of capitalist economy. Beyond a certain stage, when new investments are partly completed and the newly-built works begin to throw on the market goods which find no sale as a result of the limited power of consumption of capitalist society, accumulation lets loose the crisis. This brings not only an interruption in accumulation but also a destruction of values already accumulated. Thus capitalist accumulation periodically turns into its opposite, the destruction of capital.¹³

¹¹ *Meshdu VI i VII Kongressami Kominterna* (Moscow, 1935), p. 22.

¹² I do not claim to have read all of Varga's works. But if such a theory had existed, cross references would have undoubtedly indicated its presence.

¹³ *Two Systems*, pp. 26-27. In the English translation, the 15th word of this quotation is incorrectly spelt as "level." See the Russian edition *Kapitalizm i Sotsializm za 20 Let* (Moscow, 1938), p. 27.

But the gestation idea alone is not a satisfactory explanation, particularly for a Marxist. Its essence lies in errors of foresight on the part of producers. With the development of better business knowledge, and perhaps with the concentration of economic decisions in fewer hands—of which Varga and other Marxists make so much—there should be fewer of such errors and hence less frequent and milder depressions, a conclusion which Varga would certainly reject. Besides, the theory as stated is logically defective because the very process of producing goods and "throwing them on the market" generates income, so that we still have to explain why this income is not spent on consumption and investment, which brings us back to the starting point.

The general impression given by Varga's writings is that his, so to speak, principal theory comes close to Paul Sweezy's explanation of the downturn as an excessive accumulation of capital relative to consumption.¹⁴ The subject is somewhat slippery because here one runs into the problem of economic growth, where paradoxes are not uncommon and a fairly precise treatment, preferably with calculus, is required. But no precise analysis appears in Varga's works. In place of a proof we are given general statements in this vein:

The accumulation of capital at times leads to the expansion of the capitalist market, as the capitalists mutually purchase the goods of Division I, the means of production, serving to expand the apparatus of production. But since all means of production in the final instance can only serve for the production of the means of consumption, its sale is determined by the sale of the means of consumption produced with its aid. The relatively declining power of consumption of capitalist society therefore also puts limits to the sale of the means of production. . . . The limitedness of the power of society to consume, the proletarian situation of the masses, is the cause of all true crises of over-production.¹⁵

This comes rather close to a "straight" underconsumption theory, which Marx and his followers usually reject, perhaps because the difficulty—the distribution of income—could be corrected to some extent by relatively simple measures, such as progressive income taxation, and thus allow capitalism to survive. In any case, in order to prove that capitalism is moving towards its end, it is also necessary to demonstrate that the situation becomes progressively worse. This objective is achieved by bringing in two Marxist laws: the impoverishment of the proletariat and the declining rate of profit.

Whatever Marx said, or meant to say, about the impoverishment of the proletariat, it was one thing to have said it during the development of the Industrial Revolution on the Continent, and a very different thing for Varga to repeat it some sixty or a hundred years later, when the vastly improved position of the working classes in industrial countries could no

¹⁴ Paul M. Sweezy, *The Theory of Capitalist Development* (New York, 1942), particularly pp. 180-89 and Chapter XII. For a critique of his theory see my paper, "The Problem of Capital Accumulation," *Am. Econ. Rev.*, Vol. 38, No. 5 (Dec., 1948), pp. 777-94.

¹⁵ *Two Systems*, p. 89.

longer be denied, particularly by a person so familiar with statistical time series. Some thirty years ago Varga found that the position of the working classes had improved during the heyday of capitalism in the last century, though it had become worse in the present one.¹⁶ Since then he had a very hard time trying to reconcile the Marxist dogma with statistical reality, particularly in regard to the absolute impoverishment of the proletariat. In 1938 he said:

The laws of capitalist reproduction lead to a relative and absolute impoverishment of the proletariat. *Relative* impoverishment goes on uninterruptedly, absolute impoverishment, with interruptions.¹⁷

But he found it necessary to protect himself with a footnote taken from Lenin:

The Programme of the Communist Party of the Soviet Union, written by Lenin, says: ". . . leads to the relative and sometimes to the absolute impoverishment of the proletariat."¹⁸

Surely an issue as important as this deserves an empirical study. Real wages, as well as labor's share in national income, can be, however imperfectly, measured. Instead, Varga complains that "there is a complete lack of suitable data in bourgeois statistics." He tries to settle the question by a crude estimate of the rates of surplus value in American manufacturing, which hardly helps much.¹⁹ Yet he insists that the impoverishment actually takes place.

In his latest book, he was primarily concerned with relative impoverishment:

The impoverishment of the proletariat, according to Marx, is a permanent phenomenon in a capitalist society which follows from the fundamental laws of social development. Theoretically it takes place always—in peace and in war. What matters here is the distribution of national income between classes, and not the size of this income or of national wealth.²⁰

Just what is the usefulness of a law which "theoretically takes place always," but perhaps not in practice, is not clear. As real wages have supposedly fallen or remained constant, any increases in man-hour productivity have accrued to capitalists (and their retinue). Since this process must have gone on for quite a while, it is indeed surprising that by now, say, three-quarters of total national income is not absorbed by capitalists.

To demonstrate how the process of relative impoverishment leads to a reduction in the power of capitalist society to consume, Varga states:

This growth in labor productivity—the growth which after a few years will envelop the war-ravaged countries as well, and which, it is possible, will make

¹⁶ *Problemy Ekonomicheskoi Politiki pri Proletarskoi Diktature* (Moscow, 1922), p. 14.

¹⁷ *Two Systems*, p. 143.

¹⁸ *Ibid.*, p. 261.

¹⁹ *Ibid.*, p. 145.

²⁰ *Izmenenia*, p. 67.

a new, violent leap in connection with the utilization of atomic energy for productive purposes—this growth indicates that in order to produce the same unit of goods a much smaller quantity of labor time will be required in the future than was spent before the war. Since this relates also to those goods which enter into the consumption of the working class, it follows that even in the case when labor power is remunerated in accordance with its value, the working class will receive a still smaller part of the newly produced value and the bourgeoisie, a correspondingly larger share. This means that a new sharpening of the market problem is inevitable in the future.²¹

So the real wage of labor can never rise.²²

I may say that Varga's treatment of the wage problem is not among his more successful ventures. At times his analysis becomes extremely confused. Of course we must remember that his task—to demonstrate the absolute and relative impoverishment of our proletariat—is a hard one. Had we attempted it, we would hardly have fared better.

To what extent Varga himself was satisfied with his proof that the impoverishment of the proletariat intensifies the underconsumption force of capitalist society, I cannot tell. In any case he does not rely on it as the sole cause of the economic deterioration of capitalism. He also resorts to Marx's celebrated law of the declining rate of profit. How Marx derived this law is well known; our concern here is with Varga and the contradictions which this law brings upon him.

Whether Marx was right or wrong in claiming the exploitation of human labor as the sole source of profit, roughly speaking the average rate of profit, to be indicated by π , is the ratio of total profit, P (which in this context includes interest and similar payments), and the stock of capital, K , so that

$$(1) \quad \pi = \frac{P}{K}$$

Let profit (P) be equal to a γ fraction of national income (Y). Then (1) can be rewritten as

$$(2) \quad \pi = \frac{P}{K} = \frac{\gamma Y}{K} = \frac{\gamma}{\frac{K}{Y}}$$

Now a decline in π must come about as a result of either a fall in γ or a rise in $\frac{K}{Y}$ or of both. But the whole preceding discussion about the progressive impoverishment of the proletariat rules out any decline in γ . On the contrary, γ (the fraction of national income, or output, going to capitalists) is supposed to become ever larger.²³ With a rising γ there must indeed be a

²¹ *Ibid.*, p. 13.

²² Actually Varga's works give the impression that he himself is not sure whether or not real wages rise.

²³ This statement requires only the relative, but not necessarily the absolute, impoverishment of the proletariat.

most extraordinary accumulation of capital to yield a falling π . It usually happens during a downswing that $\frac{K}{Y}$ rises sharply because of a fall in Y , but one cannot take a downturn for granted while explaining its cause. The idea that $\frac{K}{Y}$ must increase over time (the so-called deepening of capital) is

widely accepted in economic literature with remarkably little empirical support. As a matter of fact there are good reasons to think that this ratio has not changed appreciably in this country over the last eighty years or so.²⁴

The ready acceptance of a secularly rising $\frac{K}{Y}$ is due, I believe, to our preoccupation with static problems treated within a given production function, which excludes technological progress and growth in general. A rising $\frac{K}{Y}$ is essentially a manifestation of the law of diminishing returns. Capital formation, however, is so frequently accompanied by technological change, that the operation of the law of diminishing returns in the secular sense may well be indefinitely postponed.

If a "bourgeois" economist accepts uncritically a secularly rising $\frac{K}{Y}$, he

can be accused of neglecting empirical data, but not necessarily of a logical error, since the law of diminishing returns is a great favorite among us. Varga, however, has no such excuse because he specifically denies the existence of this law:

... It is evident that this law of diminishing fertility [productivity] contains a crude non-dialectic contradiction because it follows from it that the investment of capital with a constant technique gives diminishing income. But it is impossible to invest new capital without changing the technique. . . .²⁵

The law, it appears, can be used by capitalist economists as a justification of the low standard of living of the masses, and therefore it does not exist.²⁶

Perhaps this is so. But, then, Varga has no right to assume a rising $\frac{K}{Y}$. If $\frac{K}{Y}$

does not rise, an increasing γ should result in an increasing rate of profit as given in (2). And this is the opposite of what he set out to prove.

The space devoted here to the examination of Varga's theoretical analysis may imply that he is a major economic theoretician, which is not the case.

²⁴ The reader is aware that the measurement of capital stock is a very hard task, both conceptually and statistically. See my paper, *loc. cit.*, p. 783, and William J. Fellner, *Monetary Policies and Full Employment* (Berkeley, 1946), p. 80.

²⁵ *Problemy Mirovogo Khoziaistva* (Moscow, 1932), p. 200. As a matter of fact, Varga had originally believed in the law of diminishing returns, but later publicly recognized his "error." See his *Problemy Mirovogo Krizisa* (Moscow, 1932), p. 199.

²⁶ *Ibid.*, p. 199.

His writings are essentially descriptions of economic and political events supported by numerous statistical tables. But he does not really "work" with his statistics, and his theoretical analysis is infrequent and not deep. It is indeed remarkable that the man who has repeatedly shown sufficient intellectual courage to make fairly precise and short-term forecasts (which could be tested in a few years) becomes shy and reticent in the face of serious theoretical questions. We are almost invariably referred back to Marx, or given an appropriate quotation, or finally an elaboration of Marx's thought.

As an analytical tool, Varga still uses Marx's celebrated division of total output into categories I (producer goods) and II (consumer goods). This instrument, in which variable capital (a stock) equals payrolls (a flow), and constant capital (a stock) is supposed to represent both depreciation and gross investment (both flows), is a logical monstrosity, to put it mildly. At best it can be applied to only the simplest problems, which can be solved just as well without it.²⁷ Still, if Varga, like other Marxists, insists on using this stone ax, it is his business; a skillful craftsman is to be admired with any tool. The strange thing, however, is that, strictly speaking, this tool remains unused. One has a feeling that Varga is aware of this and that he employs this apparatus for pedagogical purposes, since it is familiar to his Marxist audience, and as a symbol and shield for his Marxist orthodoxy.

This last requirement may explain in part the large gap between Varga's best and worst results. Divergence in quality is present in the works of any writer, particularly if they are spread over some thirty or more years; but in Varga's case the gap is unusually large and shows hardly any time trend (though his latest book is superior to others). His analysis of investment as a generator of *both* income and capacity (see the quotation on p. 135) is excellent and could be a good reminder to those of us who are so strongly bent on curing unemployment by increased investment. But then we are told that railroads do not enlarge productive capacity because they only carry goods and do not produce them:

The building of railways means an extension of the market in Division I, but the railways differ from the other varieties of goods in Division I by the fact that they serve merely for the transport of goods and not for their production, *i.e.*, they do not increase the mass of goods produced, like the extension of the means of production in the narrow sense of the word. They serve in addition—without raising production—to extend the capitalist market, by making the sale of capitalistically produced industrial goods possible in areas which could not before be reached owing to the lack of transport or to the cost of transport being too high. The construction of docks, regulation of rivers, etc., have the same effect as railways.²⁸

Perhaps this is a throwback to the old argument that labor engaged in services is not productive. But similar analytical defects appear when he discusses, in his latest book, the effects of public works on unemployment:

²⁷ See for instance Sweezy's heroic attempts to use this instrument, *op. cit.*, pp. 109-30.

²⁸ *Two Systems*, p. 91.

We ask further: what kind of work will the state offer to the workers it employs? If they produce consumer goods or means of production, it will be fruitless: with a constant purchasing power of society, the additional quantities of goods produced by the former unemployed will release labor power in other establishments, and unemployment will therefore not diminish. Temporarily unemployment can be reduced if the projects undertaken require a number of years for their completion: the building of railroads, improvement of rivers, construction of hydroelectric stations, etc. But as soon as they are finished, all these projects will create new constant capital and thus result in an increase in output, or in an economy of labor power, that is, they will intensify the tendency to chronic mass unemployment. It is only in those cases when the labor power is used by the state for unproductive purposes, such as the building of schools, hospitals, homes for the aged, etc., that the "employment projects" do not release labor power elsewhere.²⁹

It seems that in the meantime the railroads have become productive. But surely in a problem of this type, one cannot assume a "constant purchasing power," because the very process of additional production is apt to change it. Neither does it help much in the present context to divide public works into productive and unproductive categories. The issue here is not one of productivity (whatever that may mean), but of financing methods. A school or a hospital whose services are financed by taxation need not be, as a general case, any more employment-creating than similar organizations selling their services in the market.³⁰

This curious mixture between bright insights into the workings of the capitalist system and confusing, if not outright erroneous, statements is found in a good deal of Varga's works. Thus in his latest book he gave a perfectly sound description of the predicament in which our Federal Reserve System found itself in its efforts to peg bond prices during the recent inflation. But when it came to comparing the rise in prices with the amount of money in circulation, he took currency only, rather than currency plus demand deposits (or some variation thereof, p. 236).

His views on the effects of tariff reduction on employment are also rather peculiar:

. . . Here different tendencies cross each other. An abolition of protection would lower prices and thereby mean a temporary rise in real wages. On the other hand, abolition of protection would undoubtedly increase chronic mass unemployment. Without protection, every commodity would be produced in the country where costs are lowest, *i.e.*, where the least labour time is necessary for the production of one unit of each commodity: *i.e.*, the production of the total amount of the goods produced in the capitalist world would require even less workers than now.³¹

During the 'thirties Varga worried about the gold standard, inflation, and particularly about New Deal deficit financing in a manner that would do credit to the U. S. Chamber of Commerce—a phenomenon quite frequent

²⁹ *Izmeneniaia*, p. 300.

³⁰ This mistake is frequently found in our economic literature also.

³¹ *Two Systems*, p. 126.

among Soviet economists, who are still strong believers in "sound finance."²² Varga's fear of the public debt has persisted through the years. In his latest book he compared public debts of several countries with their respective national wealth estimates (p. 232)—a comparison characteristic of those who believe that deficit financing somehow destroys national wealth, though to my knowledge Varga did not make an explicit statement to that effect.

Other examples of similar nature could be cited. On the whole, their interpretation is, at least to some extent, a matter of opinion, and what appears confusing or erroneous to me might be approved by others. But when we come to Varga's treatment of the problem of industrial concentration and monopoly—a favorite one among Marxists—the deficiency of his analysis is, I believe, less subject to dispute.

It is difficult to find an objective measure of the degree of industrial concentration: is the distribution of firms by assets, sales or payrolls, or the distribution of "blocks" of ownership or of control, or some other alternative to be taken? But whatever the criterion, the mere existence of large units, or the demonstration that the relative importance of units above a certain *constant* size is rising, does not by itself prove that increasing concentration is taking place. If, for example, incomes of over \$5,000 accounted for 30 per cent of the total in a hypothetical year I, and for 35 per cent in year II, it does not necessarily follow that income distribution became more concentrated in year II: there may have been a general rise in income which moved some recipients from the lower into the upper group.

As far as I know, Varga has not considered these questions nor used a Lorenz, or any other, distribution to substantiate his contentions. In his latest book, for instance, he states:

The enormous degree of concentration of capital in the United States is shown by reports for the year 1943, according to which there existed eight corporations with assets in excess of one billion dollars each.²³

And he duly lists the eight corporations. But the American economy is remarkably large, and the presence of these eight giant companies taken by itself does not tell us much about industrial concentration. This is not to say that the problem is to be dismissed because Varga failed to prove his point. Second to unemployment (and for many, second to none), industrial concentration and monopoly may well be the most important economic and political problem of our day. But a leading Soviet economist is not thereby excused from the obligation of doing a good job.

These defects in Varga's analysis are not accidental. They have a very definite color arising from Varga's deeply rooted opposition to capitalism. Whatever impression our press reports may have given, let there be no doubt on this score. His attitude shows itself in his analysis, his descriptions, and

²² See for instance his *Novye Iavleniya v Mirovom Ekonomicheskem Krizise* (Moscow, 1934), pp. 29 and 83; *Problemy Mirovogo Krizisa* (Moscow, 1932), p. 36; *Meshdru VI i VII Kongressami Kominterna* (Moscow, 1935), p. 45.

²³ *Izmenenija*, p. 56.

even in his choice of anecdotes. Although his statistical tables cannot conceal the remarkable rise in our war production, his text is mostly concerned with our defects—black markets, profiteering, inefficiency, all the way down to a recital of the well-known story (which he picked up from *Harper's*) about the three businessmen at a bar, each of whom insisted on paying the bill at the expense of the government, with the cost-plus man winning the privilege. Yet there is no doubt that Varga's understanding of economic phenomena and his scientific attitude toward them are far superior to those exhibited by the majority of his colleagues. And it is for possessing these qualities that he had to take his punishment.

III

The public discussion of Varga's book, which we shall call the May Discussion, took place on May 7, 14 and 21, 1947. K. V. Ostrovitianov, who was soon to replace Varga as director and editor, was in the chair; in the audience several research organizations, as well as the faculties of the Universities of Moscow and of Leningrad, were represented.²⁴ Since a complete report of this meeting is available in English, we can confine ourselves to a brief discussion of the main issues involved.

It is both interesting and understandable that, with one exception, none of the issues considered in this paper figured in this, or any other, discussion. The exception was the theoretical level of the book, which failed to come up to Soviet expectations. Varga's retort that the book was intended for a broader audience than the one hundred Soviet doctors of economic sciences was hardly satisfactory (p. 5). The issues lay much deeper, but neither Varga nor his opponents would allude to them.

Dissatisfaction with the theoretical level of economic (and statistical) works is extremely widespread in the Soviet Union. Hardly a discussion occurs without this complaint; hardly a book review is published without the same reproach. Yet the requirements imposed on theoretical work are such as to make it practically an impossibility. It must conform to a theoretical structure whose creator died in 1883, and to the interpretation of this structure by Lenin, now gone some twenty-five years. Further, no statement may challenge any article or pronouncement by Stalin. I do not know how many degrees of freedom a serious piece of economics may have originally, but surely these three sets of restrictions do not result in many left. Nevertheless, the three sages (or four, with Engels) wrote copiously, and a sophisticated logician could probably maneuver through their works to new achievements, if he were not restricted by the additional requirement to have his results conform to the official party position that *will* be in effect when his book comes out. But an important theoretical work cannot be done in a few months, and how is one to foretell—in these days of rapidly changing economic and political conditions—the party position two or three years hence?

In 1945, when Varga was writing the book, Soviet relations with its capitalist allies were reasonably good, and he prudently adopted what he con-

²⁴ For source, see note 6.

sidered a mild tone. But by the time the book came out, these relations had become much worse—and Varga was accused of a conciliatory attitude toward the capitalist enemies.

In 1943, during the war, Varga had edited a little book³⁵ in which he tried to show that Germany was nearing exhaustion. Its purpose was obvious and no less a person than Stalin himself had come to the same conclusion as early as November, 1941. Varga reaffirmed this thesis in his last book, but the publication date found the postwar reparations argument in full swing—and how could an impoverished Germany pay reparations?

The satellite countries also embarrassed Varga. In 1945-46 their socialist programs were just beginning, and the situation there was rather confused; Varga did not say much about them, to his future regret. Shortly before the May Discussion he tried to correct his error by publishing a favorable article in his still existing journal.³⁶ In it there were, among others, bouquets for Yugoslavia and Tito—and the break was to come in a year.

In the face of such odds, a present-day Soviet economist may try to avoid controversial, and therefore important, subjects; he may cite facts with a minimum of interpretation; he may deny that the facts exist; he may shape statistics into a desired mold; he may fill up the critical gaps with proper quotations from Marx, Lenin, and Stalin. Credit should be given to Varga for making some attempt to rise above this level. During the May Discussion he said:

. . . There are comrades who say that the book is not theoretical enough. Of course, comrades, it has few quotations from the classics. I hold that theoretical generalization consists in studying new facts and attempting to generalize them by means of the method of Marxism-Leninism. I repeat that it is not a matter of simply enumerating all the facts so that they lead inevitably to the former conclusions of Marxism-Leninism, but to use the Marxist-Leninist method in studying these facts. The world changes, and the content of our work must change also.³⁷

His words fell on deaf ears.

The debate arose out of a sharp disagreement between Varga's way of stating and interpreting economic and political facts and the way that could have satisfied the Soviet orthodoxy of today. Economic and political arguments are difficult to resolve, and almost any opinion can find a degree of support. Yet some facts can be measured, and logic helps in their interpretation. But the majority of Varga's opponents were generally reluctant to use either facts or logic, and the argument degenerated into a scholastic dispute about authorities, words and definitions. Another striking feature of the discussion was its dichotomous character: things were either right or wrong; socialist or capitalist; planned or unplanned. One might say that Varga's opponents limited their number system to one and zero. Such a sys-

³⁵ *Istoshchenie Ekonomicheskikh Resursov Fashistskoi Germanii* (Moscow, 1943).

³⁶ "Demokratiia Novogo Tipa," *Mirovoe Khoziaistvo i Mirovaiia Politika*, No. 3 (March, 1947).

³⁷ *The May Discussion*, p. 4.

tem is used in probability problems, where "one" indicates success (*e.g.*, heads), and "zero," failure (tails). But to tackle social reality with such an apparatus is to repeat the feats of Don Quixote.

Much of the discussion turned on the rôle of the state in a capitalist economy and its ability to engage in economic planning. According to Soviet dogma (derived from Marx), the capitalist state is simply an instrument in the hands of monopolies; it cannot plan. Only a socialist state (presumably of the Soviet type) truly represents the people; and only it can plan. Now, in his study of the American war economy, Varga could not possibly miss such queer facts as an excess profits tax, price control, allocation of resources by governmental bodies, and so on. (He could have found other curiosities in the New Deal, but he was not concerned with that period in his latest book.) To explain such strange behavior on the part of monopolies Varga suggested the following hypothesis, which he reaffirmed during the discussion:

To summarize: the bourgeois state, as an organization of the bourgeoisie taken as a whole, was forced to attempt to subordinate forcefully the private interests of separate establishments and of individuals in order to conduct the war.³⁸

This statement sounds innocent enough, but since Varga had said nothing about the Roosevelt administration in general, it might imply that a fundamental change in the character of the capitalist state had taken place as a result of the war. Such an "improvement" would, of course, be out of the question, and Ostrovitanov immediately took up the challenge:

. . . As a matter of fact, Comrade Varga makes it appear that in peace time the bourgeois state in capitalist countries serves the interests of monopoly capital, but in the war period the bourgeois state represents the interest of the entire bourgeoisie as a whole, and, to a certain degree, enters into conflict with monopoly capital, confines it, etc.

. . . Monopoly capital holds in its hands the apparatus of state power and utilizes it in its private ownership interests. This point is decisive in characterizing the state's role in the period of monopoly capitalism, both in peace time and in wartime.³⁹

L. Gatovskii, in an article written shortly after the discussion, went much further:

Throughout the whole period of capitalism's existence the bourgeois state has never played such a reactionary and parasitic rôle in the interest of the small group of largest capitalists as it does in the contemporary epoch, the epoch of the general crisis of capitalism.⁴⁰

Their worries were well-founded. To say that the state was representing the bourgeoisie taken as a whole, rather than a few monopolists, is to come dangerously close to recognizing that perhaps not only the bourgeoisie but

³⁸ *Izmenenija*, p. 18.

³⁹ *The May Discussion*, p. 112.

⁴⁰ "Planiruushchee Sotsialisticheskoe Gosudarstvo—Istochnik Razvitiia Sovetskoi Ekonomiki," *Planovoe Khoziaistvo*, No. 2 (Mar.-Apr., 1948), p. 52.

other classes—such as farmers or even workers—may have a hand in the government. As a matter of fact, Varga had already let the cat out of the bag in the concluding chapter of his book:

The role of the state will remain more important in the future than it was before the war. The question of greater or smaller participation in the management of the state will be the main content of the political struggle between the two fundamental classes of capitalist society: bourgeoisie and proletariat. The ever-increasing polarization of bourgeois society, its division into two fundamentally opposed classes, will increase the relative weight of the proletariat.⁴¹

Aroused during the discussion, Varga declared:

. . . And I affirm further, that even in such a country as America the farmers have some influence upon policy. Unquestionably they have! Take England, for example. England undoubtedly is a country of monopoly capitalism. But can we say that now, in 1947, the working class and the Labor Party do not have any influence on England's policy, that the financial oligarchy makes the whole policy?⁴²

And in an article published shortly after the discussion he went on:

Today, thirty years after the victory of the Great October Revolution, *the struggle in Europe is becoming in its historical development more and more a struggle for the tempos and forms* of the transition from capitalism to socialism. Although the Russian way, the Soviet system, is undoubtedly the best and the fastest method for transition from capitalism to socialism, historical development, as Lenin had predicted theoretically, shows that other ways are also available for the achievement of this goal.⁴³

The striking thing is not that Varga came to these conclusions (for which, I think, he deserves credit), but that he seemed not to realize how close to a reformist position he had indeed arrived. The domestic and international implications of the latter for the Soviet government are tremendous and of such a nature that the orthodox had to rise up in arms against his stand. But their objections contained few, if any, facts. Varga was wrong because he was wrong.

Government allocation of resources during the war brought back the old question as to whether or not a capitalist state can engage in planning. Having described such activities, Varga prudently protected himself by the qualifications that:

It is self-evident that all these measures of the bourgeois state do not create . . . a planned economy. Many of these state measures remained on paper or were perverted in favor of large monopolies, whose representatives had decisive influence in the state regulatory bodies.⁴⁴

⁴¹ *Izmeneniiia*, p. 318.

⁴² *The May Discussion*, p. 118.

⁴³ "Sotsialism i Kapitalizm za Tridtsat' Let," *Mirovoe Khoziaistvo i Morovaia Politika*, No. 10 (Oct., 1947), pp. 4-5.

⁴⁴ *Izmeneniiia*, p. 27.

But during the discussion he became less restrained:

The second question, concerning *planning*. Here, comrades, much that was said was superfluous. Of course, I write that a planned economy is impossible under capitalism. But it is untrue that in total war the same anarchy of production remains as in peace time. Every general staff planned in 1944 what would be needed for the army in the following year, 1945, and presented the state with corresponding demands, etc. . . .

Of course, this is not planned economy as it exists among us, but this is also not the anarchy that existed in peace time. This is an important fact when the state buys half the goods, allocates, gives orders for a year ahead, etc.⁴⁵

He even made an attempt to do away with the dichotomous approach altogether, though with little success:

I think many comrades say, too mechanically: either-or. *Either* planned economy or complete anarchy. That is not how the matter stands. Here there is a certain analogy with the coexistence of monopolies and competition within monopoly capitalism. With the "either-or" method we cannot understand the very complex new phenomena of contemporary capitalism.⁴⁶

A most amusing debate took place as to whether the regulatory activities of capitalist governments were, or were not, planning. The idea that a capitalist state could engage in such an honorable activity was repugnant by itself: only a socialist state could plan. But the appearance of the satellite countries, which were not quite socialist (particularly in 1946-47), and which nevertheless were officially said to engage in planning, created complications. They made trouble not only for Varga (see above), but also for his opponents because these countries could not be fitted into the one-zero system of logic. It was necessary to recognize that other forms of the state, besides the completely socialized one, could engage in planning. But such a formulation ran the danger of including the British labor government which, as everyone knows, is merely an instrument of British monopolies. Therefore, at the May Discussion a reformulation was suggested along the following lines:

. . . It seems to me that planning is possible only where substantial changes have taken place in the foundations of the social structure, in the foundations of the economy. We can speak and we do speak of certain elements of planning, of the transition to planning, or of the first steps in planning, only for those conditions where the leadership of the national economy has been transferred to the people in one degree or another.⁴⁷

At the time it appeared satisfactory. But is it still intact since the break with Tito?

The scholasticism of Varga's opponents was particularly apparent in the argument about the future development of capitalism. We remember that Varga had made some fairly definite predictions which gave capitalism at least

⁴⁵ *The May Discussion*, p. 119.

⁴⁶ *Ibid.*, p. 116.

⁴⁷ V. V. Reikhardt, *ibid.*, p. 18.

another decade of existence. It was undoubtedly his "generosity" in this respect that created the general dissatisfaction, which was summarized by M. A. Arzhanov in this manner:

It seems to me that many comrades expect of this book far more than we can as yet say today regarding capitalism. We are interested in the degree to which the foundations of capitalism have been shaken, what cracks have formed in its economic foundations, how near is the hour, the longed-for hour of its crash, its downfall, etc. We want to receive from the book a sharper, clearer and for us more optimistic answer to these questions. I think that Comrade Varga, in this case, is in the position of a serious scout (if one can use this term), and the task consists in determining the condition of the enemy. . . .⁴⁸

But if Varga's forecast was erroneous, what was the correct one? Here we find his opponents remarkably shy. A. I. Kats, who had been greatly impressed by the fall in the Federal Reserve index shortly after the war, and felt very strongly about it, asserted:

. . . The real condition of contemporary capitalism consists in just that: after the first world war capitalist production had definite perspectives, it had the possibility of a growth in production, while after the second world war it does not have such possibilities, and this is confirmed by the entire economic and political situation in the U.S.A. just as throughout the whole capitalist world.⁴⁹

The other participants were more reticent as far as *concrete* forecasts were concerned and limited themselves to profound and thoughtful statements regarding the general crisis of capitalism, the discussion deteriorating into an argument as to whether or not capitalism has entered a new phase since the war. Such arguments are invariably sterile. The historical continuum can, for analytical purposes, be divided into as many phases or stages as the investigator wishes, depending on the problem involved. Every congressional election, even every session of Congress, may be treated as a phase. On the other hand, if one views the world from Toynbee's lofty heights (and why not higher?), the Second World War may appear as a mere ripple on the surface of a civilization which, for all that we know, might have begun to decline after the Thirty-Years' War. Again we find Varga trying to interject a sound note:

. . . But until the question of a new phase in the development of capitalism has been thoroughly thought out, as long as it has not even been half worked out, I cannot express a view on this question. I am an old-fashioned person, and only after study of the facts can I say whether there is a new phase or not. Perhaps there is, perhaps not. *After all, the question here is one of terminology and not of substance.*⁵⁰ [Italics supplied.]

And again it had little effect. The most amusing position was taken by I. N. Dvorkin:

The third very important sign of the appearance of a new phase, of a new

⁴⁸ *Ibid.*, p. 58.

⁴⁹ *Ibid.*, p. 34.

⁵⁰ *Ibid.*, p. 114.

stage of the general crisis of capitalism is the radical shifts in the colonies, qualitatively distinct from the shifts that took place there during the first World War.⁵¹

A few months later, Dvorkin, having seen the light, mercilessly castigated one of Varga's colleagues, L. Eventov, for having taken a similar stand earlier.⁵²

It should be noted that with all its shortcomings the May Discussion, which brought out several other interesting points, was conducted in good spirit and in a dignified manner. Several of the speakers took Varga's side; and judging from the reaction of the audience, the latter was well disposed toward him. The vituperation which marked press comments and parts of subsequent meetings was absent.⁵³ Even Varga's severest critic, Ostrovitianov, ended his concluding speech with a friendly note. It was evidently expected that Varga would see his errors and mend his ways. Instead, he refused to concede a single important point, and, if anything, went much further than he had in his book. And that was odd.

IV

Since May, 1947, several economic discussions have been reported in Soviet periodicals. They were not essentially devoted to Varga (though he was repeatedly criticized), and the issues raised went beyond the Varga affair. As a source of material for understanding the thinking and working of Soviet economists, the reports of these meetings are invaluable and deserve a special study. Here we shall give just a few highlights which are particularly relevant to the Varga controversy.

In the editorial preface of the first issue (No. 1, 1948) of the new journal, *Voprosy Ekonomiki* (*Economic Problems*), which superseded Varga's, the following statement appeared (pp. 3-4):

The successful treatment of problems of socialist economics and of economics of foreign countries is possible only on the basis of consistent application and further development of the theory of Marx-Engels-Lenin-Stalin. It requires thorough study and generalization of the practice of socialist construction, of the application of the principle of bolshevik partisanship, of irreconcilability toward all manifestation of objectivism, toward political indifference, toward servility before bourgeois science. It calls for the expansion of criticism and self-criticism—the propelling force of the development of Soviet socialist society.

The same issue of the journal carried a condensed version of Ostrov-

⁵¹ *Ibid.*, p. 83.

⁵² I. Dvorkin, "Protiv Izvrashchenii Leninskogo Uchenii ob Imperializme," *Planovoe Khoziaistvo*, No. 1 (Jan.-Feb., 1948), p. 89.

⁵³ See, for instance, I. Laptev, "Po Povodu Odnoi Diskussii," *Pravda*, (January 26, 1948), pp. 3-4; I. Gladkov, "Ob Izmeneniiakh v Ekonomike Kapitalizma v Rezul'tate Vtoroi Mirovoi Voiny," *Bol'shevik*, No. 17 (September 15, 1947), pp. 57-64; L. Gatovskii, "V Plenu Burzhuaznoi Metodologii," *Bol'shevik*, No. 5 (March 15, 1948), pp. 74-80; L. Gatovskii, "Planiruiushchee Sotsialisticheskoe Gosudarstvo—Istochnik Razvitiia Sovetskoi Ekonomiki," *Planovoe Khoziaistvo*, No. 2 (Mar.-Apr., 1948), pp. 50-69. A good bibliography on the subject is given in Barghoorn's article mentioned in note 7.

tianov's (Varga's successor's) address to the members of the new Economic Institute of the Academy of Sciences. Much of it was devoted to further criticism of Varga's works and those of his colleagues, though no new points were made. More interesting was Ostrovitianov's allusion to a "five-year academic [research] plan sanctioned by the government" (which, incidentally, remained grossly unfulfilled, p. 86). Anyone who has done any research at all will appreciate what working under such a plan means.

The June, 1948 issue (No. 6, pp. 106-119) of the same journal reported a theoretical conference held at the Economic Institute on the subject of "The Post-War Sharpening of the General Crisis of Capitalism." A. I. Shneierson, the principal speaker, touched upon every required point, such as monopolies, unemployment, crisis, inherent contradictions, imperialism and other capitalist attributes, and was warmly seconded by other participants. The whole meeting was conducted in a most proper manner, though I suspect that the audience might have been bored: surely they had heard all this so many times before. Varga did not speak (I don't know if he was present), and his sparkle was conspicuously absent.

The most important meeting, held in October, 1948, was concerned with "The Shortcomings and Problems of Research in the Field of Economics," and was attended by a number of economists from several organizations.⁵⁴ Again Varga was castigated, particularly by V. A. Maslennikov, who tried hard to atone for his defense of Varga in May, 1947, and of course by our old friend, Ostrovitianov, whose speech this time took the form of a personal admonition. But more interesting and significant were the repeated and emphatic complaints made by a number of speakers about the low theoretical level of Soviet economic works. It seems that not only do Soviet economists shy away from important subjects but even "publishers are in general afraid of books on questions of economic theory."⁵⁵ But an analysis of the cause of this strange intellectual timidity among a people who in other fields, such as mathematics, had achieved most admirable results, would have been a most hazardous undertaking; and the participants did not go beyond accepting a pious resolution. Of the remedies suggested, the most remarkable ran as follows:

In our country we have a planned economy; we also plan our research work depending on the needs of the country. This plan should be made a law which our scientific workers would be obliged to fulfill. But so far the suggested plans remain unfulfilled.⁵⁶

Throughout the criticism at these meetings Varga held his head high, yielding here and there, but adhering to the fundamentals of his position. As late as October, 1948, he declared:

I cannot follow the advice of accepting the whole criticism of my work. This

⁵⁴ *Voprosy Ekonomiki*, No. 8 (1948), pp. 66-110; No. 9 (1948), pp. 52-116. For the English translation, see *Current Digest of the Soviet Press*, Vol. 1, No. 6 (March 8, 1949), pp. 2-11; No. 11 (April 12, 1949), pp. 3-23; No. 12 (April 19, 1949), pp. 3-28.

⁵⁵ *Voprosy Ekonomiki*, No. 9 (1949), p. 70.

⁵⁶ *Ibid.*, pp. 53-54.

would mean that I deceived the Party, hypocritically saying that "I agree with the criticism," while I do not agree with it. Real criticism and self-criticism mean that the question needs a deeper investigation, without paying attention to personalities, so as to establish the truth. . . . I honestly accept a good deal of the criticism, but there are things that I cannot accept.⁵⁷

But the pressure was mounting. Already in October 1948, Ostrovitianov had reminded Varga that he "should know from the history of our Party to what sad consequences the stubborn insistence on one's errors leads."⁵⁸ What happened thereafter I do not know, but in the March 1949 issue of *Voprosy Ekonomiki* we find Varga's complete recantation.⁵⁹ So erroneous had he been on *every* point that one is left wondering. But in judging him the American reader must remember that Varga is first and foremost a member of the Party, and that the Party's stand is his supreme law.

In the concluding paragraphs of his recantation Varga states his plan to write "a new, independent book about economic and political postwar problems of imperialism without the reformist errors which were admitted" into his previous work. What this book will be like remains to be seen.

⁵⁷ *Ibid.*, p. 57.

⁵⁸ *Ibid.*, p. 96.

⁵⁹ "Protiv Reformistskogo Napravleniya v Rabotakh po Imperializmu," *Voprosy Ekonomiki*, No. 3 (1949), pp. 79-88. For the English translation, see *Current Digest of the Soviet Press*, Vol. 1, No. 19 (June 7, 1949), pp. 3-9.

THE TREATMENT OF GOVERNMENT SPENDING IN INCOME-VELOCITY ESTIMATES

By R. A. GORDON*

Our definitions and concepts in the field of monetary theory have not yet fully caught up with the growing rôle played by government in determining the size and composition of the income stream. A case in point is the treatment of income velocity when government income-generating expenditures are a large and variable element in the national income. The present note deals briefly with this problem.

Let M be the money supply (to be more precisely defined later); Y , the national income; and GNP , the Gross National Product—the latter two corresponding to the definitions used by the Department of Commerce. Then the usual, and simplest, definition of income or circuit velocity can be written

$\frac{Y}{M} \text{ or } \frac{GNP}{M}$, depending on whether we take income in net or gross terms.

The reciprocal of $\frac{Y}{M}$, i.e., $\frac{M}{Y}$, is the familiar Marshallian k . In view of the wide use of the Commerce estimates of GNP , I shall deal with income velocity in the remainder of this note as being equal to $\frac{GNP}{M}$, but everything I

say will hold in precisely the same degree for $\frac{Y}{M}$.¹

Now, in making estimates of income velocity, we generally assume without much discussion that income means the total national income (or GNP)

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¹ Clark Warburton, while also preferring gross to net income concepts, offers an objection to the use of unadjusted data for the GNP in calculating income velocity. He attempts to omit all items which "do not represent payments by the people of the nation in purchasing the output of the economy." This leads him to omit changes in business inventories, net exports of goods and services, and changes in monetary stocks of gold and silver. He would also have omitted incomes received in kind had the information been available to him at the time he made his estimates. See his article, "Quantity and Frequency of Use of Money in the United States, 1919-45," *Jour. Pol. Econ.*, Vol. LIV, No. 5 (Oct., 1946), p. 445. Whether one agrees that all of these items should be omitted would depend upon what one wanted estimates of income velocity to show. In any event, this sort of refinement is not needed to investigate the simple point raised in these pages.

including the government's contribution. But in defining M, we ordinarily take the sum of cash balances *exclusive* of those of the federal government.² In terms of the statistical series ordinarily used, we consider the money supply to be equal to currency plus adjusted demand deposits plus possibly time deposits.³ Whether time deposits should be included is a question into which we need not enter here.

This comparison, in statistical estimates of income velocity, of total income (including the government's share) with only *private* cash balances has seldom been questioned, probably because of the obvious fact that government spending creates private income.⁴ Hence the numerator of the income-velocity ratio is, in an important sense, comparable with the denominator. Private income is compared with private cash balances. In addition, the desirability of excluding government cash is immediately recognized. The rate of turnover of Treasury cash and deposits is subject to centralized, administrative decisions of public officials and throws no light on attitudes toward holding cash in the private sector of the economy.⁵

Using the customary definitions, we present in Table I estimates of income velocity for each year since 1939.⁶ Income velocity rose moderately from 1939 to 1942 and then fell steadily to a low point in 1946, when it was about one-third less than in 1942. This behavior conforms to expecta-

² See, for example, A. H. Hansen's new text, *Monetary Theory and Fiscal Policy* (New York, 1949), p. 9, where "adjusted" demand deposits are added to currency in circulation and time deposits to secure an estimate for M to compare with national income. As noted in the next footnote, adjusted demand deposits exclude those of the federal government.

³ In the words of the *Federal Reserve Bulletin*, the series for adjusted demand deposits "includes demand deposits, other than interbank and U. S. Government, less cash items in process of collection.

⁴ This kind of comparison has been questioned in part by Clark Warburton in the article previously cited. He presents two estimates of income velocity. In one, gross product including government expenditures is compared with the money supply including the cash balance of the federal government. In the other, he compares private expenditures on goods and services plus tax receipts of the government with private cash balances. The numerators of the two comparisons differ by the amount of the government deficit or surplus. See "Quantity and Frequency of Use of Money," *loc. cit.* Angell's earlier work on income velocity compared national income with the money supply defined to include all government cash balances. See J. W. Angell, *The Behavior of Money* (New York, 1936), Chap. 5 and Appendix B.

⁵ So far we have spoken merely of "the government," meaning the federal government. In this paper, I lump state and local governments with firms and individuals. Later on, I shall include the expenditures of such bodies in my concept of "private spending." Similarly, my concept of "private cash balances" includes the (demand) deposits of state and local governments. This is not as arbitrary as it sounds. There are thousands of such governmental spending units; their decisions are not closely coordinated with each other or with those of the federal government; they react to underlying monetary forces in much the same way as do firms and individuals. This is implicitly recognized in our banking statistics, where deposits of state and local governments are included in the series entitled "adjusted demand deposits."

⁶ Table I does not include time deposits, nor does it attempt any adjustments in the original figures which might make the resulting velocity estimates more suitable for particular purposes.

TABLE I.—ESTIMATES OF INCOME VELOCITY IN THE UNITED STATES, 1939–1948

Year	Money Supply ^a	GNP ^b	National Income ^b	GNP M	$\frac{Y}{M}$
1939	33.4	90.4	72.5	2.7	2.2
1940	38.7	100.5	81.3	2.6	2.1
1941	45.5	125.3	103.8	2.8	2.3
1942	52.8	159.6	136.5	3.0	2.6
1943	71.9	192.6	168.3	2.7	2.3
1944	80.9	212.2	182.4	2.6	2.3
1945	94.2	213.4	181.7	2.3	1.9
1946	106.0	209.3	179.3	2.0	1.7
1947	108.4	231.6	202.5	2.1	1.9
1948	108.3	254.9	224.4	2.4	2.1

^a Represents adjusted demand deposits and currency outside banks on June 30 of each year. Time deposits are not included. Source: *Federal Reserve Bulletin*, March, 1949, for 1941–48; December, 1944, for 1939–40.

^b Revised estimates of Department of Commerce. Figures for 1939–43 are from *National Income Supplement to Survey of Current Business*, July, 1947; those for 1944–47 are from *Survey of Current Business*, July, 1948; the 1948 figure for the GNP is from the *Federal Reserve Bulletin*, March, 1949.

tions for the war years as a whole, but several troublesome questions are raised by a careful examination of the figures. Granted what we know from other evidence, the decline in income velocity from 1942 to 1944 seems surprisingly small. Why did not the "involuntary hoarding" of these years have a greater effect on the velocity figures? Secondly, why was the low point reached in 1946 rather than 1945? With the greater availability of civilian goods in 1946 and with the relaxation and then end of price and rationing controls in that year, we should expect income velocity to be greater in 1946 than in 1945. If we now go on to look at the last years in the table, further questions arise. The increase in velocity from 1946 to 1947 seems surprisingly small. Further, velocity in 1948 was lower than in 1943 or 1944 and not greatly different from that in 1945.

Certainly this behavior of income velocity does not accord with general beliefs as to what was happening to cash balances during and after the war. We know that private expenditures decreased sharply relative to income during the war years and rose sharply relative to incomes after the war. And I think it is generally assumed that these changing income-expenditure relations were matched by a sharp drop in income velocity (of a greatly increased money supply) from 1942 to 1945 and by a large increase in income velocity (with little further increase in money supply) after 1945. The public involuntarily "hoarded" during the war years; it "dishoarded" after the war. Why are these facts not fully reflected in Table I?

Once the question is raised, the answer is obvious. It lies in the difference between private income and private spending, and this difference represents government (income-generating) expenditures. During the war—say, from 1941 to 1944—the GNP (and therefore the total of private gross income)

rose greatly, but private spending increased much less. After the war, as government spending declined, private spending rose more rapidly than private income and the GNP.

Table II records these facts and presents a new series for "income velocity," computed by taking the ratio of private *spending* (rather than income) to the money supply.⁷ That is, we deduct the income-generating expenditures of the federal government from the GNP and compare the difference with the amount of private cash balances. Now the velocity figures behave the way we should expect. Income velocity based on private spending fell 38

TABLE II.—RECOMPUTATION OF INCOME VELOCITY TO EXCLUDE EXPENDITURES OF THE FEDERAL GOVERNMENT

Year	GNP ^a	Federal Government Expenditures ^b	Private Spending ^c	"Corrected" Income Velocity ^d
1939	90.4	5.2	85.2	2.6
1940	100.5	6.2	94.3	2.4
1941	125.3	16.9	108.4	2.4
1942	159.6	52.0	107.6	2.0
1943	192.6	81.2	111.4	1.5
1944	212.2	89.0	123.2	1.5
1945	213.4	74.8	138.6	1.5
1946	209.3	20.8	188.5	1.8
1947	231.6	15.6	216.0	2.0
1948	254.9	20.9	234.0	2.2

^a Copied from Table I.

^b From same sources as GNP figures in Table I.

^c GNP minus expenditures of federal government on new goods and services.

^d Private spending divided by money supply as given in Table I.

per cent between 1941 and 1943, remained constant between 1943 and 1945, and rose nearly fifty per cent between 1945 and 1948. The 1948 figure was the highest since 1941, whereas in Table I velocity in 1948 was lower than in any of the years between 1939 and 1944.

It may be argued that "private spending" as defined in Table II is not the most appropriate numerator to use in computing the "corrected" velocity figures—that at least tax payments should be added to consumers' expenditures and private investment. Undoubtedly, a case can be made for this view. Private cash balances are held in anticipation of tax payments as well as of purchases of goods and services from the private sector of the economy. When tax payments increase, the need to hold cash also rises. Hence in Table III, we present a second set of "corrected" velocity estimates. The denominator is the same as in Tables I and II; the numerator represents the sum of "private spending" as given in Table II and all personal taxes.⁸ As

⁷ To repeat what was said in an earlier footnote, we have defined private spending to include income-generating expenditures of state and local governments. Also, the series for "money supply" includes the cash balances of such bodies.

⁸ We include personal taxes paid to state and local governments as well as federal personal taxes. (Indirect business taxes are already included in the Commerce estimates of

we should expect for the years covered, the ratios in Table III generally lie between those in Table I and Table II; during the years of heavy federal deficits they are closer to the corrected than the uncorrected estimates. So far as variation over time is concerned, the velocity figures in Table III behave much more like those in Table II than those in Table I. Either version

TABLE III.—RECOMPUTATION OF CORRECTED INCOME VELOCITY
TO INCLUDE PERSONAL TAXES

Year	Private Spending ^a	Personal Taxes ^b	Private Spending Plus Personal Taxes	Money Supply ^c	"Corrected" Income Velocity ^d
1939	85.2	2.4	87.6	33.4	2.6
1940	94.3	2.6	96.9	38.7	2.5
1941	108.4	3.3	111.7	45.5	2.5
1942	107.6	6.0	113.6	52.8	2.2
1943	111.4	17.8	129.2	71.9	1.8
1944	123.2	18.9	142.1	80.9	1.8
1945	138.6	20.9	159.5	94.2	1.7
1946	188.5	18.9	207.4	106.0	2.0
1947	216.0	21.6	237.6	108.4	2.2
1948	234.0	21.0	255.0	108.3	2.4

^a Copied from Table II.

^b From same sources as GNP figures in Table I. State and local as well as federal taxes are included. See footnote 8.

^c From Table I.

^d Ratio of private spending plus personal taxes to money supply.

of the "corrected" estimates tells us more about changes in the public's attitudes toward holding cash than do the unadjusted estimates in Table I.

Given these facts, how shall we handle government expenditures in our definition of income velocity? This depends on the purpose which we want the velocity concept to serve. There are several possibilities.

We may want estimates of income velocity in order to measure an abstraction in which economists are sometimes interested, the income or circuit period.⁹ This is the time it takes, on the average, for a dollar of the (active

private spending.) Admittedly, this involves duplication, since state and local expenditures are already included in private spending. I see no other way of handling the problem, however. Firms and individuals hold cash in anticipation of state and local tax payments, and the governmental bodies which receive the taxes hold their own balances in anticipation of their expenditures. By including both taxes and (state and local) governmental expenditures, we begin to depart from a strict income concept, but this is inevitable when we ask why people want to hold cash. The motives for holding cash cannot be investigated by confining our attention exclusively to income-generating transactions net of all duplications. This point is discussed further later in the text.

⁹ Cf. Fritz Machlup, "Period Analysis and Multiplier Theory," *Quart. Jour. Econ.*, Vol. LIV, No. 1 (Nov., 1939), pp. 1-27, reprinted in *Readings in Business Cycle Theory* (Philadelphia, 1944), pp. 203-34. See also, J. W. Angell, *Investment and Business Cycles* (New York, 1941), Chap. IX.

or total) money supply to create a dollar of income.¹⁰ If we think of velocity as the reciprocal of an average income period, it would seem appropriate to compare total income (including government expenditures) with all cash balances which are fed by receipts of income and drained by income-generating expenditures. This approach would, I should think, lead to the inclusion of government cash and deposits in the velocity ratio.¹¹ But the moment we do this, we deprive ourselves to some degree of valuable information about private spenders' attitudes toward their cash balances.

While the notion of "income period" may sometimes be useful—for example, in studying payment *habits* and the effect of institutional patterns on the relation between income and the stock of money—our interest in income velocity frequently centers on the more dynamic aspects of the "cash balance" approach. This is particularly true if we are trying to explain short-run price and income changes. In dynamic analysis, we are especially concerned with the changing attitudes of firms and individuals toward spending, given their incomes and other data, including the size of their cash balances.

For this range of problems, our first concept of "corrected" income-velocity (with tax payments as well as government expenditures excluded) seems more appropriate today than the conventional one. We thereby secure a comparison between private spending on privately produced output and private cash balances. In this way, we put our treatment of velocity on all fours with our handling of the relation between spending and income in the usual type of Keynesian model. In such models, the emphasis is first of all on (private) *spending*. Income enters as one (and the most important) variable affecting private spending. Our adjusted concept of velocity retains this emphasis on private spending. To compare *total* spending, including that of the government, with the stock of money is to lose the opportunity to study possible interrelationships between private spending and private cash balances. Given the present size of the federal government's budget and the probability that government expenditures will show substantial variations in the future, this point may be of some importance.

There remains the question whether we should interpret private spending to include tax payments. So far as I can see, the purpose for which we want to use velocity estimates will provide the answer. Suppose that taxes rise and lead to an equal reduction in private expenditures on privately produced output and that private cash holdings remain unchanged. Should our velocity figure remain constant or decline? If we are treating private spending on private output as the dependent variable, we shall want to record the fact that such private spending has declined despite the constancy of the money supply and look to other independent variables for explanation. In

¹⁰ For some comments on the meaningfulness of "period" concepts, see R. A. Gordon, "Period and Velocity as Statistical Concepts," *Quart. Jour. Econ.*, Vol. LV, No. 2 (Feb., 1941), pp. 306-13.

¹¹ Warburton has published such a series of velocity estimates, as well as one which excludes government cash and deposits. See "Quantity and Frequency of Use of Money in the United States," *loc. cit.* See also the reference to Angell's *Behavior of Money* in footnote 4, above.

this case, we need a definition of velocity that would permit the velocity ratio to fall. If we are treating the money supply implicitly as the dependent variable, the size of tax payments as well as the volume of spending on output enter (through the "transactions" and "precautionary" motives) to determine what cash balances people choose to hold. In the example cited, we should then need to define our variables so that the velocity figure would remain constant, to reflect the assumed constancy in the need for holding cash balances.

To pursue this point much further would carry us beyond the limits originally intended for this paper. I cannot avoid, however, an additional comment on the subject of studying motives for holding cash balances through the use of income data. If we treat the money supply as the dependent variable and then ask on what other variables it depends, why do we add only tax payments to private income-generating expenditures? Can we stop short of *all* payments which influence the desire of firms and individuals to hold cash? If we cannot, then some version of transactions velocity, not income velocity, seems to be the appropriate measure to use.

As a matter of fact, we may want to make from time to time a variety of comparisons between different kinds of cash balances and different totals of spending.¹² Among these may be a comparison between private cash balances and total—private and government—spending. In a sense, this comparison permits us to trace how much cash the public chooses to hold to support not only its own consumption and investment expenditures but also the level of government activity. Directly and indirectly, the latter is matched by taxes and (*ex post*) private saving. But when we make this or other comparisons, we should understand clearly what it is that the resulting velocity ratios tell us.

A final example may help to illustrate the different stories told by the various velocity concepts that have been mentioned. Assume that private spending declines cyclically but that government expenditures rise by a corresponding amount, so that Y and GNP remain the same. Assume further that M does not change, the government financing the additional expenditures by borrowing from non-bank investors.¹³ Then income velocity accord-

ing to the usual definition—*i.e.*, $\frac{Y}{M}$ —remains constant, because the public's

cash balances "support" the same level of total income as before. But private spending is now smaller in relation to private cash balances. Both of our "corrected" measures of income velocity reveal this fact. Thus far, however, we have assumed that tax payments did not change. If taxes were now increased to finance the increased government expenditures (the increased

¹² One useful comparison of this sort would be that between consumers' spending and consumers' cash balances. Warburton (*op. cit.*, p. 449) has done this for the years 1938-45, with the qualification that he adds personal taxes to consumers' outlay.

¹³ With higher expenditures, the government may need larger working balances. We neglect this minor complication.

taxes just absorbing the savings formerly borrowed by the government), our second corrected measure of velocity, which had first fallen along with the other corrected measure, would rise to its initial value, despite the fact that Y continued unchanged and private spending remained at its new low level. In this case, the change in the method of financing the higher level of government spending causes this particular measure of velocity to rise, even though neither Y nor private spending changes when the tax increase occurs. In this case, we have not permitted the assumed decline in saving to offset the increase in taxes.

We thus secure the following results for our hypothetical example. Income velocity in the usual sense remained constant throughout, both when private spending first fell and also when taxes were increased. Our first corrected measure behaved as private spending did, falling initially and then remaining at the new low level when taxes rose. The second corrected measure first fell, but when the tax increase was put into effect, it returned to its former level.

THE CONCEPT OF SECULAR STAGNATION

By BENJAMIN HIGGINS*

After seven years of full employment, interest in the stagnation thesis has naturally abated; but secular stagnation is far from being a dead issue. Arthur F. Burns, outlining the program of the National Bureau of Economic Research, went so far as to say:

For some time we have planned a volume that would sum up and interpret the massive information developed in our studies of production, employment, and productivity. The most important problem to be faced in that final volume is the setback to economic progress in the 'thirties: whether that decade defines a new trend of stagnation or a passing historical episode.¹

Harrod, in the preface of his recent book, stated that:

The idea which underlies these lectures is that sooner or later we shall be faced once more with the problem of stagnation, and that it is to this problem that economists should devote their main attention.²

Terborgh, and Swanson and Schmidt, have recently considered it worth while to write books refuting the thesis, while Fellner, Wright, and Keirstead devote considerable space to the subject. Recent writings of Domar, Sweezy, Florin, the Council of Economic Advisers, and others show a resurgence of interest in problems of economic growth, of which the stagnation thesis is a part. It seems desirable, therefore, that the concept of secular stagnation should be clarified, so that future discussion of it will be as fruitful as possible.

One of the chief aims of my chapter in the *Essays in Honor of Alvin H. Hansen* was to provide a precise definition of secular stagnation; and to make the concept more clear, I illustrated it with a diagram. Judging from J. M. Clark's review of the Hansen essays,³ my efforts in this direction have not met with complete success. If so distinguished an economist as Professor Clark could so completely misunderstand what I said, it seems likely that other readers will be similarly misled.

It may be useful, therefore, to amplify my diagrammatic definition of stagnation.

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¹ Arthur F. Burns, *Economic Research and the Keynesian Thinking of Our Times*, Twenty-Sixth Annual Report of the National Bureau of Economic Research (New York, 1946), p. 17.

² R. F. Harrod, *Towards a Dynamic Economics* (London, 1948), p. v.

³ This Review, March, 1949, pp. 499-507.

Figure I is a simplified version of the diagram presented in my essay. The curve Y_p is "potential gross national income," showing the trend of gross national income at full employment. Y_a is the trend of "actual" gross national income, while C shows the "actual" cyclical movements of national income. Strictly speaking, the "actual" curves are not historical records, but show what would happen with a "neutral" government policy—that is, one which does not affect the level of total spending. "Stagnation" is defined as "a growing gap between the trend of gross national product at full employment and the actual trend of gross national product." Stagnation therefore begins at time S . It is this diagram Professor Clark calls "*a reductio ad absurdum* . . . adapted to proving that any condition that could ever occur is one of secular stagnation." Clark considers the definition "absurd" be-

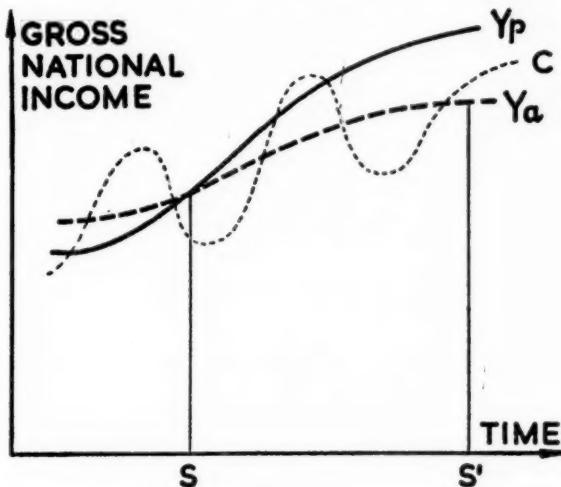


FIGURE 1

cause the diagram showed income reaching a point "about 90 per cent above the full employment trend," and contends that "by this device, the only condition that would *not* register as secular stagnation would be long-continued over-employment due to war or some other emergency."

These strictures are the result of translating the quantities in the diagram from the money terms in which the whole analysis of the essay is cast into real terms. The Y_p curve shows gross national income or product at "full-employment-without-inflation." I now regret not having stated explicitly that the curves of actual income are *not* at constant prices; it seemed to me so obvious from the diagram itself, and from the whole discussion of the essay, that such a statement would be redundant. A gross national product above the full employment level means nothing more "absurd" than inflation; a level "about 90 per cent above the full employment trend" is not far from the present position in the United States. A trend line above the

full employment level means nothing more unthinkable than a chronic inflationary gap, a tendency for investment to exceed savings at high levels of employment, and a rising price trend over the course of economic fluctuations as a whole. This condition probably exists in undeveloped countries today. It also seems likely that all countries go through a phase of chronic under-savings in the early stages of capitalistic development. Both Domar's and Harrod's theories of dynamics imply that such is the case.

Apart from the confusion of money and real quantities, Clark's criticism misses a fundamental aspect of my definition, viz., that the gap between potential and actual income is *growing*. Situation "a" in Figure 3 would not be "stagnation" in the terminology of my essay, but only a chronic deflationary gap. Situation "b," which is included here for the sake of completeness, would be the state of affairs resulting from Schumpeter's 2-phase cycle; it would represent a chronic and constant inflationary gap—not a very likely situation.

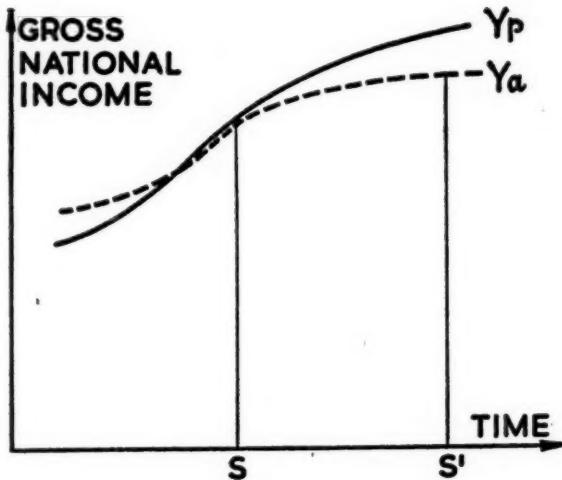


FIGURE 2

Actual intersection of the potential and actual trends is not essential to the concept of stagnation. The curves may coincide during some phase of development, as in Figure 2. That is, an economy may go through a period in which fluctuations take place evenly around a trend of "full-employment-without-inflation," as implied in neo-classical business cycle theory. Domar's, Harrod's, and Kalecki's theories of trend suggest that such a situation is unlikely; when an economy is growing at an increasing rate, a chronic inflationary gap is likely; and when potential income is growing at a decreasing rate, there is likely to be a chronic and growing deflationary gap.

While Clark's specific criticisms are therefore irrelevant, they have made me realize that "the trend of national income at full employment without

"inflation" is a slippery concept. "Inflation" in this context cannot mean any rise in the general price level; it must mean a rise that takes place (or continues) *after* full employment is reached. Such a definition of inflation is clear enough, but hides certain difficulties. If the points on the Y_p curve represent the levels of gross national income at which full employment is reached in the upswing, the only relevant points on the trend curve are those which lie on cyclical upswings; when national income goes through the trend curve in a downswing, full employment will not prevail. If the Y_p curve is defined as the trend of gross national income at full employment, with prices just high enough to yield full employment, the question arises as to just how high that would be. It is possible—perhaps even likely—that if full employment is reached when prices are rising, only a continually rising price level would maintain full employment. On the other hand, if full employment is reached after a period of fairly stable prices, as in 1929, it is conceivable that full employment could be maintained with a price level falling as techniques improved.



FIGURE 3

The first interpretation is, I think, what most economists mean when they speak of "full employment without inflation" as a goal of economic policy. If the war had ended just when full employment was reached late in 1941, the goal would have been to maintain full employment without a further rise in the general price level. Few economists indeed would oppose a limited price rise during an approach to full employment from a position of unemployment, if the price rise could be checked as soon as full employment was reached. The present situation is more complicated; what does "full employment without inflation" mean today? It doesn't mean reducing prices to the 1941 level while maintaining full employment, although most economists would probably favour some "disinflation" if it did not threaten full employment. The main question is, presumably, whether the distortion of the price-cost structure during the *past* inflation can be more easily cured by reducing prices that are too high, or by raising incomes that are too low.

These ambiguities in the concept of "full employment without inflation"

are a strong argument for defining "potential income" in real terms. My chief reason for defining it in money terms was that I wanted to distinguish the Hansen theory of increasing underemployment from the Marxian theory. As I pointed out in my original essay, if "potential income" is defined

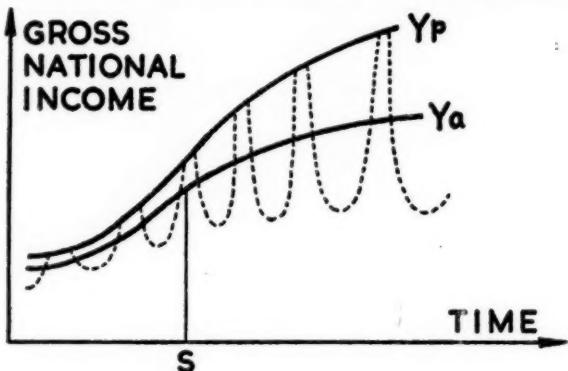


FIGURE 4

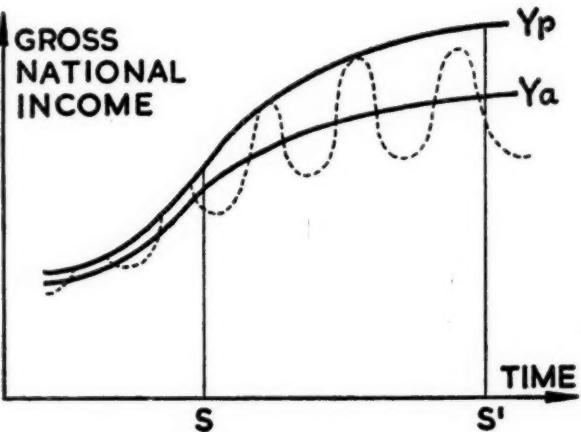


FIGURE 5

in real terms, increasing amplitude of cycles will *in itself* cause a growing gap between potential and actual trends of national income, even if fluctuations take place around a full employment equilibrium position, booms becoming more inflationary while depressions become deeper. This case is quite different from the case in which booms are becoming weaker, which is, I believe, the case Hansen had in mind.

I now perceive, however, that it is possible to define the trends of actual and potential income in real terms, and still make a diagrammatic distinction

between the Hansen and Marx versions of stagnation. The Marxist concept, with the trends defined in real terms, is illustrated by situation "a" in Figure 3, the Hansen concept in Figure 4. A "condition that could occur" that "would not be stagnation" is shown by situation "a" in Figure 3, with Y_p and Y_a redefined in real terms, and the C curve showing actual fluctuations in national income in real terms. Since there was presumably no period in which full employment was continuously maintained, the Y_a curve would begin slightly below the Y_p curve. Stagnation would begin when $dY_a/dt < dY_p/dt$ (t being time); that is, when the gap begins to grow.

With the trends defined in real terms, it is possible to subdivide this stagnation concept into several possible cases: depressions may become deeper, while the duration of booms (periods of full employment) remains unchanged; depressions may become longer, while booms remain unchanged;

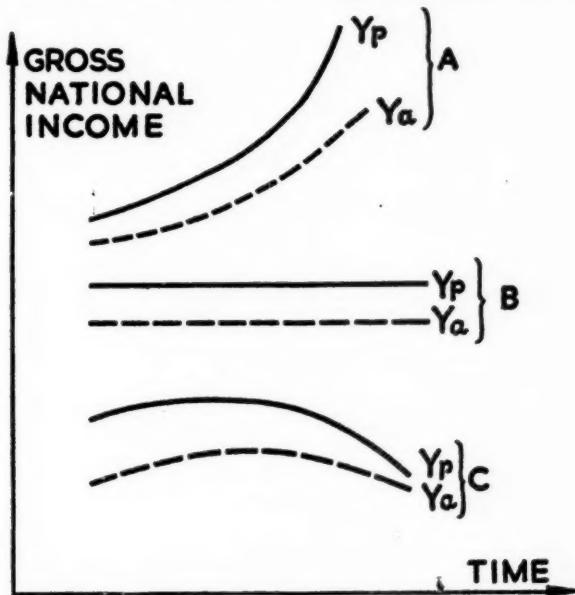


FIGURE 6

booms may become shorter, while depressions remain unchanged; and upswings may become weaker, in the sense of falling farther and farther below full employment at their peaks, while depressions remain unchanged.

With these revisions, the definition of "stagnation" should be perfectly clear. However, it still has defects. The definition would apply to the situation "A" in Figure 6, but not to situation "B", nor to any phase of situation "C". Case "A" is admittedly very unlikely; an economy in which potential national income is rising at an increasing rate would almost certainly have a chronic inflationary gap rather than a growing deflationary

gap; but it is not inconceivable. Situation "B" might exist for a limited period, and situation "C" might develop in economies with declining populations. The term "mature" is subject to the same sort of misconstrual as "stagnant."

I suggest, therefore, that the term "stagnant" be applied only to economies in which national income (apart from the influence of government policy) is in fact not growing. Economy B in Figure 6 is stagnant, and the economy in Figure 5 is stagnant at point S' . The situation ruling between S and S' in Figures 1 and 2, which Hansen described as stagnation, should be called instead "increasing under-employment," which is what it is. Economy A in Figure 6 is an expanding economy with increasing under-employment, economy B is a stagnant economy with chronic under-employment, economy C is declining with decreasing under-employment, and so on. It is tempting to suggest that an economy that has passed its point of maximum rate of growth, which in Figure 5 coincides with the point where increasing under-employment begins, should be described as stagnating. The danger is that "stagnating" will be confused with "stagnant," and it is probably safer to spell out the description: from S to S' , Figure 5 shows an economy with increasing under-employment and a declining rate of growth. This description is an awful mouthful in comparison to "stagnation," but if it avoids the quarreling over words that has characterized so much of the discussion of Hansen's thesis, it will be well worth using.

COMMUNICATIONS

The Effectiveness of the Federal Antitrust Laws: Comment

In a recent symposium which appeared in this *Review*,¹ fifteen well-known economists and lawyers presented their answers to an inquiry into the effectiveness with which the federal antitrust laws had protected and preserved a "broadly competitive system." The contributors generally agreed that the antitrust laws had not been without influence upon the American economy but did not agree as to whether this influence had been sufficiently strong to preserve a broadly competitive system. Even in their disagreement, however, the reader could hardly fail to note that nearly all of the contributors, whether by explicit statement or by implication, (1) identified the inquiry primarily with manufacturing industries in which commodities were produced for sale in national markets² and (2) agreed that the larger the number of producers of a commodity, the more the economy would be broadly competitive and, hence, the more society would be benefited, so long as economies of scale were not sacrificed. The editor of the symposium was "not altogether sure that the desirability of having a broad competitive base would not justify foregoing full exploitation of the advantages of large-scale production."³

At the outset, I should like to commend editor Keezer for having conducted the poll and the *Review* for having brought the results to those of us who are interested in antitrust policy and its far-reaching consequences. Although, as Mr. Keezer pointed out in his summary observations, the contributions indicated a remarkably broad scope of opinion, only in such an approach can "bigness" and "anti-bigness" biases cancel each other out and afford the less experienced student of public policy the opportunity to view antitrust problems with more emotional detachment. However, both of the above impressions left with the reader deserve some comment.

It can be fairly well demonstrated that no federal antitrust law, no matter how sagaciously conceived and applied, could, for a reason more obvious than any of those mentioned, make our entire economy highly competitive. Hence, the first comment is by way of criticism of the inquiry as formulated rather than of any of the replies of the fifteen contributors. Also, there is a considerable amount of evidence that a large number of small producers of a given commodity does not necessarily make for the near-perfectly competi-

¹ Dexter M. Keezer, Editor, "The Antitrust Laws: A Symposium," *Am. Econ. Rev.*, Vol. XXXIX, No. 3 (June, 1949), pp. 689-724.

² Professor George W. Stocking and Thurman Arnold stressed other sectors of the economy as well.

³ *Loc. cit.*, p. 718.

tive economy so highly desired. This textbook condition of perfect competition carried to its logical end without stringent qualifications might possibly eliminate the need for a federal antitrust law altogether, but it certainly need not increase competition in the process.

Most statistical measures of monopoly have been limited to the per cent of output, employment or assets in a particular industry accounted for by a given number of firms.⁴ If the "commodity" be defined with sufficient rigidity and the "market" with sufficient looseness, it can be shown that the manufacturing sector of the economy is characterized by a fairly high degree of concentration of control. If one, however, examines closely the national income by industrial origin and the personal consumption expenditures pattern data for the American economy,⁵ he finds that a surprisingly small per cent of our economic activity falls directly under the jurisdiction of the federal antitrust laws. In 1946 almost 70 per cent of the national income originated from economic activity essentially intrastate in character or had been either cartelized or placed beyond the reach of the Antitrust Department by the Supreme Court or Congress, e.g., service industries, retail trade, government and government enterprises, farming (parity price and output quotas), local construction, local and railroad transportation (Reed-Bulwinkle Bill), local utilities, etc. It can be quite logically argued that much of this economic activity, particularly retail trade, is at least indirectly policed by the federal antitrust laws since most of these industries obtain supplies from the manufacturing sector of the economy. But it cannot be argued that the maintenance of competition in manufacturing is a sufficient condition for a highly competitive economy. Moreover, it is hardly probable that the indirect influence which antitrust prosecution can exert upon intrastate and protected economic activity does any more than offset the exemption of labor unions from the antitrust laws.⁶ Hence, the creation or maintenance of a broadly competitive economy is contingent upon far more than a strong and enlightened antitrust policy.

Secondly, a plea for an atomistic supply side of a market without accepting the attendant "atomized" market is highly unrealistic. The very reason we get a large number of producers in many industries is that there are many markets for a particular commodity or service, each of which is virtually independent of all others, e.g., the market-oriented industries, particularly the service industries. It is almost inconceivable that a large number of small producers can possibly be in close competition with each other in all parts of a single national market except in the production of a commodity for which the cost of transportation over long hauls is a negligible part of total delivered costs. An entrepreneur may enter an industry to open up or to compete for a particular market area, but he also locates his firm so that he will be free from the competition of many other producers

⁴ Professor Mason pointed out quite clearly the distinction which should be made between competition in the market sense and competition as it relates to the political economy. *Loc. cit.*, p. 712.

⁵ See National Income Supplement to *Survey of Current Business*, 1947.

⁶ United States v. Hutcheson, 312 U.S. 219 (1941).

of similar commodities and services. Hence, an infinite number of small producers in some industries may be consistent only with a large number of small local markets, many of which would not fall under the jurisdiction of the federal antitrust laws. Moreover, there is little convincing evidence that local markets supplied by numerous producers are, *ipso facto*, competitive.

Both of these observations point to an important but hitherto little explored field of investigation for purposes of public policy—the significance and degree of monopoly in intrastate markets. Of the 143.7 billion dollars of personal consumption expenditures in 1946, considerably over 50 per cent was expended on such items as rent, laundry, dry cleaning, local produce, insurance, recreation, local transportation, medical care, death expenses, auto repairs, and similar commodities and services—virtually all of which are produced beyond the reach of the federal antitrust laws. And in spite of the fact that there are literally thousands of entrepreneurs engaged in producing each of these commodities and services, dozens of which are located in each fairly large city, the writer has observed little evidence of vigorous competition among them. Demand for most of these commodities and services cannot be conveniently shifted from one local market to another; and within each local market the consumer has no real "alternative" sources of supply. An inquiry into the price behavior of milk, dry cleaning, laundering, barber shop services and similar items made in at least the last half-dozen cities in which the writer has resided has produced the standard reply: "We have nothing to do with prices, they are set by the association." Yet these are the items that take a large part of the family's weekly pay envelope. Surprisingly enough, the nation's annual bill for barbershop services exceeds that for refrigerators and washing and sewing machines combined; we spend three times as much annually upon medical care and death expenses as we do upon new and used automobile purchases; rent and household utilities alone account for almost ten per cent of total annual personal consumption expenditures. However, the local real estate association, barber shop association, undertakers' association, dairymen's association, etc., are beyond the reach of the Sherman Act.

If current local market behavior harbingers the result of an atomization of industry program, it is not at all clear that society would reap the fruits of competition in the process. Until state antitrust laws are applied with considerably more vigor than they have been in the past, the old argument that the large national producer through economical transportation and economies of scale (however inimical to the *political economy*) serves to eliminate local monopoly still has some validity. And until the Supreme Court reverses its position taken in the *Hutcheson Case* and Congress makes much of the exempted economic activity subject to antitrust prosecution, a broadly competitive economy cannot be attained through the federal antitrust laws purely on statistical grounds. As stated by Professor Kreps, "the squeaking axle may naturally get the grease," but it does not necessarily follow that the squeaking axle is the most defective part of the wagon.

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Housing and Inflation: Reply to Professor Ellis

In *The Review of Economics and Statistics* for August 1949, Professor Howard S. Ellis wrote an article about the January 1949 Economic Report of the President and the January 1949 Annual Economic Review by the Council of Economic Advisers, in which he said at page 175:

Furthermore, the present Report seems to be more honest than its predecessors. Thus it candidly says that "the fight against inflation prevents us from undertaking these welfare and development programs with the speed and on a scale that would otherwise be desirable" (p. 8). Honesty of this sort is apt to be better long-run policy than Keyserling's testimony, which can scarcely escape the charge of either *befuddlement* or *disimulation*, to the effect that "the production of more housing is anti-inflationary in the same sense that the production of more food would be anti-inflationary." This casuistry is easily recognized as the same argument as that by which the National Association of Manufacturers sought to prove that increased taxation of corporate profits would be inflationary: investment in plant would be reduced, production would be smaller, prices would be higher. It is gratifying that the economics of Mr. Keyserling does not find its way into the 1949 Report. (Italics mine. Professor Ellis refers to my testimony of August 4, 1948 at pages 308-360 of the printed hearings of the Senate Committee on Banking and Currency entitled "Control of Inflation," 80th Congress, 2nd session.)¹

There are several points about Professor Ellis' statement which call for comment.

1. Professor Ellis' appraisal uses the term "report" interchangeably to refer to the January 1949 Economic Report of the President and the January 1949 Annual Economic Review by the Council of Economic Advisers. Thus it is not always clear as to which of the two documents he is talking about, although it is sometimes made clear by page references. In any event, I signed one of these documents along with my two colleagues on the Council and joined with them in "assisting and advising" the President in the preparation of the other under the terms of the Employment Act of 1946. Therefore, I cannot fairly be disassociated from the report the "honesty" of which Professor Ellis so highly approves. I wholly subscribe to the passages which he picks out for special commendation; and if they did not represent a job of "teamwork," I might even ask Professor Ellis how he can know that I did not actually draft or initiate (as well as subscribe to) the parts which he most applauds. I submit that is a "heads I win, tails you lose" attitude for Professor Ellis to pick out portions of reports I signed or helped prepare which he likes and say that they are *not* my "economics," but to pick out portions of testimony I have given which he dislikes and say that they *are* my "economics." Further, conscientious study of my testimony would reveal its basic accord with the reports which Professor Ellis praises.
2. Professor Ellis selects the subject of housing to support his alleged con-

¹ A striking illustration of Professor Ellis' careless treatment of my views is that he does not even cite what testimony he is talking about (I also testified in February, 1949), and therefore the reader of his article could not refer to my testimony and judge whether it was correctly portrayed.

trast between what he calls the "honesty" of the Council's (or President's) report and the "dissimulation" of my testimony. However, the specific housing policy recommendations in my testimony, namely, that the long-range housing program should have been enacted promptly in 1948 despite the then current inflation, was precisely the same housing policy which the *whole* Council and the President repeatedly embodied in reports during the same inflationary period. (See reports issued in January 1948, July 1948, and January 1949.) Presumably, therefore, Professor Ellis objects not to the *policy conclusions* which I reached in my testimony, but rather to the *line of analysis and reasoning* which I used to support these conclusions. For if his basic disagreement was with the policy advanced by the whole Council and the President, then his singling out of me for invidious criticism could rest only on personal bias.

3. Turning now to this issue, Professor Ellis' criticism of my line of analysis and reasoning is based upon twenty-odd words which he quotes utterly out of the context of my testimony. I said in part the following:

The point has been made that the Taft-Ellender-Wagner housing bill is inconsistent with an anti-inflation program because it would add to demand.

This point is not well founded. If there is a shortage of housing, and if this is contributing to excessive housing costs in the same way that a shortage of food would contribute to excessive food casts, then the production of more housing is anti-inflationary in the same sense that the production of more food would be anti-inflationary. *It may well be that, for a time, we cannot divert much more labor and materials to the total production of housing in view of other competing national needs. But let us make sure that they are competing national needs, and not competing non-essentials. And even then, there would still remain the question of the composition of the housing that is being produced.* It would still be sound and desirable to produce relatively more low-rent housing for veterans and others of modest means, and relatively less high-priced housing for families who can get along very nicely for a while with what they already have. The Taft-Ellender-Wagner bill is designed basically for this purpose, although this is not true of the "title VI" provisions contained in the bill. Thus, under present circumstances, talk about damping down the demand for housing is undiscriminating and mistaken until one breaks the demand down into various types. *Some types of housing should be expanded, other types should be contracted.* (p. 348. Italics supplied.)

Certainly, the foregoing quotation leaves no room for Professor Ellis' statement that I did not recognize, or did not honestly reveal, that when resources were being strained by inflation we could not allocate more of our resources to one purpose without subtracting more from another. I said just this, not only generally, but also with specific reference to housing, as is indicated by the last sentence of the quotation. I am prepared to admit that the foregoing quotation in its compact form, while sufficient to show how misleading was Professor Ellis' selection of one sentence from it, did not embrace all of the qualifications which anyone could obtain from hearing or reading my testimony in its entirety. Even a casual reading would reveal my clear recognition that, while an increase of supply exerts a downward influence on prices in the long run, additional drawing upon resources for housing (or anything else)

during a highly inflationary period adds to the general inflation unless other demand is controlled and withdrawn elsewhere. But this still left the point, which my testimony treated of fully, that both economic and social considerations during 1948 required the expansion of certain types of resource use, and therefore made the restriction of other types even more imperative, through a rounded and comprehensive program. Professor Ellis might quite legitimately have disagreed with the particular reapportionment of resource use in accord with economic or social priority which I proposed in 1948, or argued that the methods which I advocated to bring it about were impractical or undesirable. But this would provide no justification for a criticism which distorted my meaning when it was so easily ascertainable.

4. Further, my testimony with respect to housing was fully understandable only in the framework of my general discussion of the economic situation pertaining in August 1948. My argument was that the inflationary situation was dangerous because it was creating *relationships* within the pattern of production, prices and incomes which could not be sustained and which consequently threatened a substantial downturn in employment and production. Concentrating upon this problem of relationships, I concluded that stabilization at high levels could not be accomplished solely or safely through the traditional measures for curtailing the money supply, restricting credit, lifting taxes, or seeking to reduce the general rate or pressure of fundamental economic activity. I pointed out that these measures needed to be complemented by more discriminating efforts to promote more workable *relationships*. This in turn required, for example, that some incomes be maintained or even advanced, while others were reduced; that some production be increased, while other production was restrained; that some programs of overwhelming importance to domestic welfare or international security be maintained or even expanded, while other programs competing for the same resources be correspondingly contracted, etc. I also went to great lengths to distinguish between short-range and long-range needs, while stressing that some proposals were of such vital long-range significance that they should not be delayed even though they complicated the immediate situation. (See particularly pages 311, 339, 348-350 of my testimony.) There may be many economists who would disagree in some respects with my not entirely traditional analysis of the 1948 type of inflation and how to deal with it. But there are too many eminent economists who do agree basically with my analysis (some past presidents of the Association wrote approvingly of it) for a few words of it to be torn out of context and then the whole of my "economics" dismissed as "befuddlement or dissimulation." Name calling and nothing more is not enough.

5. Professor Ellis' assimilation of the foregoing views to the idea that increased taxation of corporate profits in August 1948 would have been inflationary is indeed befuddlement. My testimony, in fact, argued for *very high* taxes in 1948 on the ground that they would be entirely consistent with a high enough level of business investment and would serve as a damper upon inflation. Subsidies or tax preferences to speed up the production of a critically needed commodity in short supply might be justified even in a generally inflationary situation, and in fact were resorted to during the war, when accompanied by

other measures to reduce other forms of demand which had a lower priority. If, in 1948, the shortage of some other material had been as damaging to the economy on balance as the shortage of housing (weighing short- and long-run factors, present and potential), it would have been perfectly defensible to advocate special measures to speed up production of that other material just as the President and the Council advocated measures to speed up housing.

6. At the conclusion of my testimony, the chairman of the Senate Committee on Banking and Currency had this to say:

I would like to say, now that you have come to the conclusion of your talk, and I sat all through it; that you have in a more comprehensive way than any witness that has come before us in my memory met this situation that you came to talk to us about. Speaking from this chair and for myself only, and I do not doubt very much reflecting the minds of some others here, you have shown a grasp of the situation, you have shown a manifest fairness, you had a lucidness of utterance of expression, you have not been dogmatic, and you have impressed me with the fact that you realize how delicate the situation is; all of these things, after all, are experimentations, but you have a reason for the faith that is within you (Hearings, p. 360).

Professor Ellis may not value so highly as I do the comments of Senator Tobey on the ground that he is not an "economist." But those who believe in the purposes of the Employment Act, and realize the difficulties involved in obtaining legislative approval of policies developed by economists, will not dismiss lightly the judgment of one of the sponsors of the law and the then chairman of a Committee which deals with so much economic legislation. This judgment concerning my sincerity by a distinguished public servant who knows my record and knows me in action may properly be set against the charge of "dissimulation" by someone who knows neither and who obviously did not study my testimony nor view it in its setting.

In view of Professor Ellis' position as President of the American Economic Association, and the quotation of his statement about me in leading daily newspapers, I have asked the editor of *The American Economic Review* to give space to my reply in order that it may reach the largest feasible number of the profession. However, I would not make this request solely on grounds of personal privilege, were it not for my belief (a) that the members of the profession are entitled to a clear setting forth of my views after the Ellis statement, and (b) that many members of the profession deeply interested in the Employment Act of 1946 will want to see its purposes carried forward more successfully than they can be if economists of standing are careless in their treatment of those responsible for its administration.

LEON H. KEYSERLING*

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Plans for an International Economic Association

Active plans were set afoot last year for the organization of an International Economic Association (I.E.A.). The initiative came from a group of French economists who induced UNESCO to call a conference of a small group of

economists from the United States, Great Britain, France, Italy, Norway, and some other countries. The American Economic Association accepted an invitation to participate in these conferences. A special committee, consisting originally of H. S. Ellis, T. W. Schultz, J. W. Bell, G. Haberler (chairman), J. A. Schumpeter, and later enlarged by John V. Van Sickles, J. A. Willits and F. C. Mills, was appointed and given the task of studying the project.

Two preparatory international conferences were held at the headquarters of UNESCO in Paris which were attended by G. Haberler as representative of the American Economic Association. It was decided to hold a constituent conference of the I.E.A. in September, 1950. The following draft of the statutes of the I.E.A. was worked out and will be submitted to the September meeting. The late Professor J. A. Schumpeter was unanimously designated, and accepted, to serve as the first president of the I.E.A.

The statutes provide that the I.E.A. is a federation of national economic associations. There will be no individual members of the I.E.A. The reason for this arrangement is that it was felt that in this way the new organization can be made efficient and inexpensive.

The purposes of the new association are strictly scientific. UNESCO has kindly agreed to support the undertaking financially and through advice on organizational matters, in the interest of international scientific and intellectual cooperation. But the I.E.A. will be entirely autonomous and will be directed by the representatives of the various national economic associations. In those countries, as in France and Italy at present, where there exist no national economic associations, *ad hoc* committees of leading economists will be set up, but it is hoped that in the near future a French and Italian Economic Association will be organized.

The I.E.A. will start its activities by organizing international round table conferences on specific questions of scientific interest and it should be emphasized that the participants of these conferences will be individual scholars and not representatives of national associations.

Upon unanimous recommendation by the Special Committee on the I.E.A. the Executive Committee of the American Economic Association has decided to join the I.E.A. The Royal Economic Society, the Canadian Economic Association and Scandinavian and other Continental European Economic Associations have likewise indicated their willingness to adhere.

PRELIMINARY DRAFT FOR THE STATUTES OF THE INTERNATIONAL ECONOMIC ASSOCIATION

Article 1. The International Economic Association is hereby established with purely scientific aims.

Article 2. The general purpose of the Association is to initiate or co-ordinate measures of international collaboration designed to assist the advancement of economic knowledge, and in particular: (a) to secure and develop personal contacts between economists of different countries, by organizing round table discussions and conferences; (b) to encourage the provision of international media for the dissemination of economic thought and knowledge (such as bibliographies, abstracts, dictionaries, translations, etc.).

Article 3. The Association shall consist of a Council and an Executive Committee.

Article 4. The Council shall consist of appointed members and co-opted members.

The appointed members shall be chosen by the associations or committees listed in Annex A and by such other professional or scientific associations or committees of economists as may be decided by the Executive Committee. Such associations or committees may be organized on a geographical basis or may be international organizations concerned with a particular branch of economics. The associations or committees shall appoint permanent delegates, but shall have the right to substitute, if necessary, alternate delegates for any or all of their permanent delegates to represent them at a particular meeting.

The co-opted members shall not exceed 25 per cent of the total membership of the Council. They shall be chosen by the Executive Committee, subject to approval by the next Council. The Council shall meet every three years and review the general policy of the Association.

At any meeting of the Council the members representing an association shall be entitled to exercise the votes of any absent member of the Council representing that association.

Article 5. The Executive Committee shall consist of not less than six, nor more than twelve members of the Council. The Executive Committee shall be elected by the Council and *shall hold office for three years or such other period as may be determined* by the Council. No country shall have more than two members of the Executive Committee, and those countries which have four members of the Council shall have at least one member of the Executive Committee. If any member of the Executive Committee is unable to attend a meeting of the Committee, the President may exceptionally authorize the association concerned to appoint a properly qualified alternate.

Article 6. The officers of the Association shall be a President, a Vice President, a Treasurer, and a Secretary. The President, Vice President, and Treasurer shall hold office for three years or such other period as may be determined by the Council. The President, or in his absence the Vice President, shall act as Chairman both of the Council and of the Executive Committee. Their appointment shall be confirmed by a majority of the Council. Such confirmation may be asked and received by letter.

Article 7. The Council shall appoint such number of Honorary Presidents as may at any time be appropriate.

Article 8. The Treasurer shall be responsible for supervising the receipt and disbursement of moneys on behalf of the Association.

Article 9. The Executive Committee shall appoint a Secretary, who shall carry out the instructions of the Executive Committee.

Article 10. The Executive Committee shall draw up for approval by the Council regulations which are in conformity with the Statutes of the Association. These regulations may be amended by the Council by a majority vote of all members of the Council.

Any amendment of the Statutes shall require a two-thirds majority of all members of the Council.

Article 11. Both the English and French texts of the Statutes and Regulations are authoritative.

Interim Arrangement

An interim Executive Committee has been established as shown in Annex B. It will undertake necessary steps in order to constitute the Council as soon as possible. It is authorized to accept any moneys, to negotiate agreements and contracts with UNESCO, to prepare a program for the activities of the Association. It will nominate the first Executive Committee and officers of the Association and seek their confirmation by the procedure laid out in Article VI.

BOOK REVIEWS

Economic Theory; General Economics

The Economic Mind in American Civilization. Vol. III, 1865-1918. By JOSEPH DORFMAN. (New York: Viking. 1949. Pp. xiv, 494, lxxvii. \$6.00.)

Mr. Dorfman's imposing work surveys far more than just the history of American, *professional* economic thought; and far more is added to that than merely the few "lay" contributions to the special literature of economic science. It is equally concerned throughout, also, with opinions in all quarters, in the country at large, on all the economic and social questions and public issues widely agitated in successive periods. In this third volume—alone here under review—which covers the time from 1865 to 1918, the professional economists get, in all, about one-half of the total space; naturally a far larger share than was given, in the two earlier volumes, to their few, unimportant predecessors in the Colonial and pre-Civil War periods. But even in this volume the professional economists never dominate the total scene. In each successive Part, on its short period of either a decade or somewhat more, the opening chapters present a survey of the national economic, social, cultural, and political scene and public issues of that period. Then also, both embedded in that and extending on through some chapters beyond it, we get a multitude of quotations and short summaries, and for some leading figures longer accounts, of the politico-economic views and arguments on specific issues, or more general social philosophizings, of a vast variety of Americans of the time: businessmen, politicians, leaders of labor and farm movements, journalists and literary figures, clergymen, and reformers, radicals, and conservative spokesmen of all types. Only when, for each decade, all that material has been presented, are we introduced to the "new generation" of professional economists, and the new writings or utterances within this period of their older colleagues, first encountered in an earlier section. And so, in the last half more or less of each period-section, devoted to economists, we get digests of *their* opinions on the public issues of their times, and their contributions to our store of objective, logical and factual economic knowledge—examples of both together in unanalyzed mixtures, presented as on the same plane of interest, in the same frame of reference, with each other and all with the popular opinions and views reported in the preceding chapters.

Now such a book calls for different types of reviews, for different audiences. In this review, for professional economists, I focus chiefly on the question, how the history of American professional economic thought fares in this handling of it as only one part of a much larger theme. With the general idea in one sense I am wholly in sympathy: as far as possible, in my opinion, we *should* study the history of our inquiry and the work of our predecessors not in isolation but, as here, in the full context of the general movement of American life and thought, and with attention to the complex interactions of the thinking of economists with that going on in the society around them.

But an undertaking so large has, along with its great potential value, very great, inevitable difficulties; and I do not feel that Mr. Dorfman has succeeded in overcoming the latter nor, in consequence, in realizing the former, at all fully.

Before proceeding, however, to adverse criticism, let me in justice notice the book's very real and substantial merits. It admirably combines two kinds of excellence, both important and too rarely united so well. The work of pure scholarship on a vast array of varied materials is indeed impressive, and I think it probably—though I am not well equipped to judge this—in general thorough, accurate, and reliable throughout. And secondly, in consequence of the author's writing skill and attractive qualities of mind and temper, the finished result is good, easy reading, never dull, at all points highly interesting.

But while it is thus a book to be read for both pleasure and profit—abundant, solid, valuable information—it is not, to me at least, very satisfying intellectually. I can only report that to this one reader it seems deficient in intellectual depth or penetration, clarity, cogency, and illumination. And this deficiency, I think, is explained by two all-pervading defects, of different kinds—one merely mechanical, and the other one rooted in the author's whole way of thinking. Let me speak first of the former.

In carrying out his vast undertaking and dealing with his plethora of materials, Mr. Dorfman, I think, has not practised enough selection and concentration. The overcrowding of the volume and each Part makes each chapter and page too superficial; there are too many, too brief, bare, inadequate summaries of the views of too many figures. On many an important economist we get only a bare report of a few minor fragments of his personal views and contributions to our science; no rounded view of the over-all pattern of his thought and work as a whole; and nothing in the way of analysis and criticism, even of the fragments which are reported. And in part this happens so often because the crucial, additional part of the space required in order to really say something about every economist (and every other figure) worthy of attention, has been totally wasted in numberless small bits individually devoted to very unimportant economists and non-economists, who should all have been left in oblivion. Mr. Dorfman apparently is one of those scholars—I use the word in its narrow, special meaning—who seem unaware of the vital distinction between a book to be read and a pure reference-catalog which must be complete in 'coverage' of names. But, of course, even the latter goal is far from being attained in a compromise between the two things.

Perhaps a few rough "statistics," in illustration and support of that criticism, may be of interest. By an incomplete count I get a list of 54 economists—from Amasa Walker to Wesley Mitchell inclusive—individually considered in this volume, in amounts of space ranging from fractions of a page (for each of many) up to 18 pages. In my estimate the 54 together get 242 pages—out of 490 in the volume; on the average, $4\frac{1}{2}$ pages each. But the lion's shares go to J. B. Clark—17 pages; J. R. Commons—18; H. J. Davenport—15; Veblen— $13\frac{1}{2}$; and Wesley Mitchell—18. At the other end of the scale a number of those who I think deserve, not as ample but substantial

treatments—7 or 8 pages would seem to me a minimum—get as short shrift as do many in the horde of very minor figures. Examples of this are C. F. Dunbar—1½ pages; Simon Newcomb—4; T. N. Carner—1½, all devoted to his gospel of thrift and containing nothing about any of his real contributions to economic analysis; Allyn Young—a short paragraph, barely one quarter of a page—actually!; and H. L. Moore—2½ pages.

But my *chief* complaint is *not* over the matter of *relative* allocations of space among different economists—as to which, within wide limits excluding only such glaring cases as I have just mentioned, the author is entitled to his own scale of preferences. I do not begrudge him his generous allotments of space to his favorites, though I personally would give less to Commons. With the medium amounts—6 to a dozen pages each—which a large number get, I am in nearly all cases content; though I do think it is absurd that Irving Fisher is in this company with only 9¾ pages—the author's maximum of 18 would be as appropriate here as anywhere. Taussig's 7 is fair enough, and so on. The *main* point is that if, say, a score of the very minor economists—selected as such by the author's, not my judgments, with the few exceptions I have indicated—and a similar proportion of the even more numerous minor, non-economist figures in the book, very minor "public" figures in their times—if all these and the in any case meaningless crumbs of space devoted to them were eliminated entirely, and the saved space redistributed at the author's will among persons dealt with, the result could be to make the book more useful than it is.

I am not too confident, however, that any use which Mr. Dorfman might have made of additional "room" in dealing with economists, would have seemed to me to add much "light" upon their views and contributions to our knowledge. For I come now at last to my fundamental criticism of the structure, not of the book as an arrangement of materials, but of the "economic mind" or outlook—the entire conception of the character of economics and its place in our culture—which the book expresses. As I partly intimated near the outset, Mr. Dorfman nowhere appears to recognize how radically unlike each other in their characters, and *largely* separable or independent, are the economic-scientific and ideological parts or ingredients of the total thought-structures of economists, embodied in their writings. Not only does he always merely report—quote or paraphrase—without stopping to analyze and criticize, what was said on a subject by this economist and what by that other citizen, and never hint that both parts of the former's mixture of economic analysis and ideology, and the wholly or mainly ideological content of what the latter said and any small bits of economic analysis included therein, are not all "of a piece"; of the same mental quality, all to be judged in the same way by the same undivided tests and standards, and pertinent in the same way to all the same undistinguished aspects of the common subject.

There is even, despite the *general* absence from the book, or rarity in it, of explicit statements of Mr. Dorfman's own interpretive and critical judgments, a positive indication emerging from it as a whole, of what I think is his view: that the ideologies of historic "schools" of American economists,

and their varieties, as to scope, method, and substance, of work in their science, *have* made up logically organic, integral, unitary, indivisible wholes. There has been a progress—the whole book implies—from the once “orthodox” and predominant ideology-and-methodology—a *necessary* union of *laissez-faire* views with an inferior, narrow, dogmatic-logical and not empirical science—to the gradual triumph of a better and equally indivisible whole, consisting of an improved science of far wider scope and stressing empirical research more than logical analysis, *and* a more enlightened, humane, “liberal,” and pro-the-people instead of pro-business ideology.

Now at first thought it may seem astonishing that Mr. Dorfman, who is in general a disciple of Veblen, can thus ignore and so fully abandon Veblen's own most explicit and emphatic stand on this very matter. No one has ever outdone Veblen in insisting that economic science should be *entirely* divorced from *all* ideologies and value-judgments. “Modern science” can be interested only in describing the facts without judging them, and not at all in giving or supporting any advice of any kind to anyone, nor in any question about the validity or merits of any set of ideals. The old “orthodox” economics was not a science in that sense but a rationalization of and apologia for the business economy-and-culture and political creed; and the “new economics” must not replace one ideology with another, but be a morally neutral, solely descriptive and not evaluative science.

That was Veblen's precept; but of course he failed to live up to it. He wrote satire *against* the business economy-and-culture, entirely directed by his own set of values, and called *that* his neutral or purely objective and descriptive science. Now it is a detail that Veblen's values were by no means entirely in line with the widespread American, sentimental, democratic idealism which all or most of the so-called Veblenians, none the less, retain as their own ideology. This they unite with a science conceived more—in two ways—on Veblen's lines. With him they turn from the logical science of only the economic element and problem in the lives of men and societies, to a science so wide in scope as to be vaguely, more or less, an all-embracing economic-social science; and in method, devoted to fact-finding and descriptive studies carried out with no more than a minimum of theoretical work or logical analysis. Mr. Dorfman, then, is in general agreement with his fellow Veblenians who follow not Veblen's precept, nor exactly his practise even, but their own modification of the latter.

Nor is it any wonder that neither Veblen nor his pupils have carried out his precept; it is my belief that no one could or can do so. I reject Mr. Dorfman's apparent view that varieties of economic thought and the associated ideologies, and the progress of our science and of moral wisdom, are inseparably bound together into perfect unities. But I also reject the opposite extreme view, expressed in Veblen's precept as opposed to his practise, and preached today in the profession by many at the opposite pole from him in other respects: that between what is truly scientific in the mental work of economists, or leads to objective, logical and factual knowledge, and their ideological views, there is *no* mutual relevance and dependence in any degree, but *complete* irrelevance and independence in both directions.

The crucially important problem of science and ideology is less simple than each view implies. A history of both economic-scientific and ideological thought in our profession and country, and their interactions, should contribute much toward the much needed, fuller understanding of this problem. But a history in which the two streams are never clearly discriminated and no effort is made to analyze and criticize their combinations, cannot so contribute. This is a scholarly and readable book, full of information well presented as such, but offering little to the understanding.

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Problems for Economic Analysis. By CLARK L. ALLEN, AURELIUS MORGNER, and ROBERT H. STROTZ. (New York: Prentice-Hall, 1948. Pp. xi, 148. \$1.85.)

Recent publications indicate that the cycle of problems texts in economics has run its course. This is particularly true in the field of economic theory at both the elementary and advanced levels. Among recent publications, this set of illustrative *Problems in Economic Analysis*, while not definitive, has the appeal of an excellent teaching aid to students and instructors alike. The authors state, "This book has been prepared in the conviction that the beginning student of economics should be given extensive opportunity to apply the techniques he has learned to the type of problems that are basic to economics. If the student can reproduce *verbatim* the instructor's lectures and can outline the textbook in minute detail but cannot utilize the information in problem solving, his training has been of little value. . . . The prime purpose of this book is to help the student and, incidentally, the instructor, to discover what it is that the student has not fully comprehended" (p. v).

While the sequence of problems follows the order of conventional texts, the coverage of problems and required subject matter also embrace the newer national income approach to the subject of economics. This book can effectively supplement any of the currently accepted texts as is demonstrated by cross-correlation tables supplied by the publishers. Quantitatively, the coverage is quite complete, and qualitatively, the problems range from elementary to advanced. Section XII, "The Pricing System in a Model Economy" (pp. 141-48), is in this latter category, yet it provides a thorough summary of the core materials of economic analysis. The authors state, ". . . that the subject matter may be rearranged to suit the needs of the individual instructor" (p. v). However, as within sections (*cf.* Section VI) rearrangement is not altogether feasible for pedagogical or mechanical reasons.

In modesty the authors write, "We suspect that we have not avoided all the errors and inadequacies that characterize first attempts" (p. vi). The following suggestions may improve their second edition. The holding company problem (p. 11) is too complex for students of principles of economics. Problem 4, Section III (p. 29) could better be utilized as a classroom demonstration since it allows too great latitude of answers for any standard in grading. Likewise, Problems 6 and 7-A (pp. 33-35) have the same disadvantage. The extended problem dealing with costs (Section VI, pp. 71-

83) could be improved by the elimination of the repetition of computations in successive steps of the problem. This change would materially reduce the work of the problem and would permit the desirable addition of pertinent questions serving to emphasize the principles illustrated by the problems. Too often in extended problems of this sort, the work of computations and problem solving becomes the student's end rather than that of seeing the development and application of some general propositions. Realism would not suffer in these problems if the number and size of the figures were reduced. The problem on national income accounting (p. 121) could stand the addition of appropriate questions to make the work more significant.

One is struck with the omission of problems dealing with capital valuation, the law of comparative advantage, tariff and taxation effects on resource allocation and utilization, and the indifference analysis. Perhaps this latter omission may be excused as beyond the normal scope of principles courses. A more fundamental problem to be overcome by authors attempting multiple-text adaptation such as this is that of terminology and procedural differences. The former deficiency, a long-standing source of confusion, is well illustrated by the problem presented in this book. However, while the authors preface "A Note on Terminology" (p. vii), it could hardly and does not ease this difficulty. Whenever appropriate, the more practical solution might be to include a prefatory note on the particular terminology and procedure assumed in a given problem (*cf.* Section IX, Problem 5, p. 115). Likewise, implicit assumptions in a few of the problems cause frustration and the needless waste of energy.

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Economic History; National Economies

The Socialized Agriculture of the USSR—Plans and Performance. By NAUM JASNY. (Stanford: Stanford University Press. 1949. Pp. xv, 837. \$7.50.)

The publication of Naum Jasny's long-awaited volume on Soviet agriculture is an event of major importance both for those interested in the economics of the Soviet Union and for those whose interests encompass the general theory of economic development. His is the first such study in a decade, and it is the most thorough and comprehensive ever published on the subject. It deserves a great deal of attention.

In this paper I propose to examine only two of the many theses he develops. First, he reaches the surprising conclusion that labor productivity on the farm, in the period 1928 to 1938, increased but slightly on a man-year basis and probably not at all on a man-hour basis. Second, he concludes that the welfare¹ of both farm and urban dwellers is no higher at the end than at the beginning of the same period. He uses both of these developments as part of his arsenal of proof that the socialization of agriculture has not been

¹ Here and throughout this paper, I am using the term welfare to mean the consumption of consumer goods in real terms.

successful. He concentrates quite properly on the ten or eleven years following the beginning of the first Five-Year Plan since it was in these years that the basic economic policies were formulated and carried through.

I

The Soviet agrarian problem is a large part of the total Soviet economic problem—even at the end of the 1930's some 55 per cent of the total labor force was engaged in agriculture (the corresponding U.S. proportion was 13 per cent). Even so the agricultural output per capita of the total population was low by Western standards. If the USSR is ever to become a strong industrial economy it will somehow have to release many millions of farm workers to the industrial labor force. Barring any great extension of foreign trade, this means that farm labor productivity must increase. It is for this reason that Jasny's productivity calculations are of such interest. The experience of the 1930's should give us some notion of whether the future will bring real increases in productivity on the farm or whether the Russians are doomed to keep a large proportion of their labor force striving to wring the necessities of life from the soil.

Jasny's calculations of farm labor productivity are as follows (Chap. 18): He finds that the kinds of farm products changed somewhat from 1928 to 1938, with more importance attached to industrial crops in the later year. For the numerator of his fraction, therefore, he uses an index of physical output based on the value of the component parts at constant (1926-27) prices. He takes official data for technical crops, but writes down the grain crops about 20 per cent to allow for a change in official crop reporting methods which took place in the mid-thirties. He also makes an upward adjustment for 1938 "for normal weather," replacing the actual outputs (as adjusted for the new crop reporting method) with trend computations because 1938 was a poor crop year. On these assumptions he finds that gross farm output increased from 15.5 billion rubles to 17.4 billion rubles between 1928 and 1938. Certain deductions are then made in both years to give a "production for sale and consumption" figure—the deductions are essentially feed, seed and unfinished production. The net output figures for 1928 and 1938 are then 10 and 11.5 billion rubles, respectively. Output, accordingly, is estimated to have increased by 15 per cent (p. 676).

For the denominator of his productivity fraction Jasny assumes a decline in farm labor of 10 per cent (p. 714). This is derived from various Soviet sources which indicate that the number of persons dependent on agriculture fell by somewhat more than ten per cent. He assumes that the number employed in agriculture fell somewhat less than the number dependent on agriculture because in the total population the proportion of persons between the ages of 15 and 59 increased.

Jasny's index of farm labor productivity resulting from these calculations is therefore 115/90, or 128, in 1938, with 1928 as 100. After following the intricate calculations in Jasny's volume, one has the feeling that they are probably fairly accurate; my own impression was that his result was perhaps somewhat low. Principally this impression rests on what seems to me

an erroneous assumption with regard to the decline in the farm labor force. Accurate figures are hard to come by in this area, but Lorimer has made some careful analyses which show a 15 or a 20 per cent reduction (on alternative assumptions) in persons dependent on agriculture,² as against Jasny's lower figure. Furthermore, I regard with skepticism Jasny's assertion that the farm labor force would decline less than population dependent on agriculture. It seems to me that a mass farm-to-city migration would be disproportionately heavy with persons of working age.

But even if the index of farm labor had fallen to 80 instead of 90, the productivity index would have risen to only 144 rather than 128. It is certain that, given the state of data, it is folly to attempt to choose between 128 and 144. Jasny has established his main thesis, which is that the productivity increase was much less than is usually assumed. The common picture of a radical shift from small primitive farms in 1928 to large mechanized collective farms in 1938 is somewhat overdrawn, but the changes were substantial and one might reasonably expect much greater productivity increases than 30 to 45 per cent.

Jasny goes on to point out that one of the results of the collectivization process was to permit more days of work per year per farmer. This increase he set at about 45 per cent; its effect on hourly productivity is offset by some indeterminate amount by a probable reduction in the length of the work day, but he concludes that "a more than negligible increase in [farm] output per hour is definitely excluded and a slight decline is equally possible" (p. 420).

* * *

What are we to conclude from all this? The implication seems to be clear that the socialization of agriculture failed, and that future progress of the economy (once the ravages of war are repaired) will be slow inasmuch as its base is in agriculture.³ Jasny characterizes the developments of the decade by quoting the old saying: "A mountain yielded a mouse" (p. 441). I suggest that this interpretation is misleading, not to say dangerous, because the implication of the interpretation is plain that the future industrial growth will be slow. Such an implication, I maintain, should not be drawn from the developments of the decade.

Consider some of the circumstances which prevailed during a part or all of the period. First, net investment on the farms between 1928 and 1938 was practically zero. The essential cause of this was the large disinvestment that took place in the early 'thirties as a result of the rapid pace of collectivization. Peasants resisted the process bitterly, and one manifestation of their resistance was large-scale destruction of buildings, equipment and, most important of all, livestock. This disinvestment was not made good until the end of the decade. It can be maintained that this was the fault of socializa-

² Frank Lorimer, *The Population of the Soviet Union; History and Prospects* (League of Nations, Geneva, 1946), p. 110.

³ Jasny never quite says this in so many words. But it is an implication of his thesis which I think is unavoidable.

tion and should not be offered as an extenuating circumstance. But the real point is that it is non-recurring.

Second, and allied to this, the horse population declined drastically in the early days of collectivization—through starvation and slaughter. This was the only instrument of farm power in 1928, and the exalted tractor did not become available in quantity until late in the 'thirties. In consequence, the total amount of power available on the farm was less in 1933 than in 1928, and was about the same in 1938 as in 1928, even when tractors, trucks, and combines are included (p. 458). By that time, it may be noted, the annual rate of increase of power on the farm was large (it was cut off by the war).

There are really two separate facets of the agrarian problem, of which the release of farm labor is but one. The other is the total output, which must be increased at least as rapidly as the population grows. This can be done only by increasing yields per acre or the amount of cultivable land, or both. In the long run this may become a serious brake on Soviet economic development, for their supply of good land is not abundant. But with a population increase of some 12 to 15 per cent per decade, it should not be impossible to increase total output comparably through continuing investment in reclamation and irrigation projects and the development of new fertilizers, hybrids and so on. This lends emphasis to the critical importance of investment in the agricultural sector of the economy. It may also bear on the other part of the problem since it will tend to reduce labor productivity to the extent that submarginal land is brought under cultivation. Indeed, during the period under review here this apparently happened; the quantity of land under cultivation was increased by some 20 per cent, which is undoubtedly one major reason why yields per acre did not increase materially.

The fact that farm population and labor were released in substantial quantities between 1928 and 1938 (Lorimer estimates the total "rural redistribution decrement" at 25.4 million persons)⁴ even though the land margin was being extended, and particularly without appreciable net investment or increment of power, seems very significant as far as future industrial growth is concerned. Furthermore, it must be remembered that these developments occurred in little more than ten years after a most disheartening beginning during which not only was there large destruction of capital, but resentment, resistance, misery and starvation on a scale difficult to imagine. Finally, the industrialization of agriculture—the provision of tractors, trucks, combines, fertilizer and so on—was finally proceeding rapidly at the end of the decade and might have been expected to begin paying off had not the war interfered.

I am not arguing here that collectivization benefited the peasants, that it raised living standards, or that it is "good." But I do feel that the results that Jasny describes, and which appear at first glance to signify weakness, need to be interpreted with care. I have the feeling that the Soviet agrarian problems were by no means near solution by 1938, and that the road ahead would have been long and painful even without the wartime interruptions.

⁴ *Op. cit.*, p. 161.

But some at least of the problems were being got in hand, and a number of the important adverse factors—the great cattle slaughter, the process of learning to use machinery, and so on—were nonrecurring. I suggest that it is plausible to infer that the release of labor to industry, had it not been for the war, might well have continued at a high and perhaps increasing rate.

II

Let us now turn to the welfare question. As in the previous case, it is not Jasny's data or computations with which I wish to take issue. Rather it is with the possible and implied interpretations of the facts he presents.

Jasny is at pains to point out that the increase in agricultural output did not increase the living standards of the peasants. Much of the additional farm output was in technical products and since the population was increasing, "The level of per capita food production of precollectivization years was never again reached" (p. 34). The state's procurement policy also operates against the collective farmer. Before collectivization, of course, the farmer disposed of his surplus on the market; in a bad year he put less on the market and tended to maintain his own consumption. Since collectivization, the state has taken what it needs from the collective farm, at low prices, and what is left over is available for the collective farm members. In a poor harvest year, the state, though it may reduce its absolute procurement somewhat, usually takes a greater percentage of the total and the farmer has less. The marketing procedure is thus reversed; the "first Commandment" is that the state shall have its share. If the peasant's welfare suffers, it is unfortunate.

This contrasts sharply with the official propaganda which talks of a happy and prosperous peasantry working contentedly for the Motherland with the latest tools. Jasny is quite effective in analyzing the actual developments and then quoting the official claims or promises, which of course look absurd in juxtaposition. If any was needed, there is adequate proof in this volume that Soviet propaganda has little regard for or relationship to the truth.

But it seems to me that these assertions, although quite correct, are wide of the real point. As I read the development of the Soviet economy, it seems to me that the pay-off in the minds of the planners is not welfare at all; rather it is the maximization of the rate of net investment so that the industrialization of the nation can go forward as quickly as possible. Whether the high investment rate is designed to build up military might or peacetime capital goods is not relevant to the present argument. In a capitalist society (except in wartime) the decision as to how high the rate of investment is to be is made by and large by consumers when they decide how much to save.⁵ Similarly, the decision as to how to dispose of the fruits of increased productivity between leisure and higher living standards is a function of the relative marginal utility to the people of more leisure and more real income. In the Soviet economy, on the other hand, these decisions are made by the government. The developments before and after the war seem

⁵ With modifications associated with the name of J. M. Keynes.

to me to point to only one hypothesis; to wit, as productivity increases (both in industry and agriculture) the resources released are put into the investment goods sector, and the standard of living is maintained at the minimum level consistent with the avoidance of political unrest. It is clear that this results in a rate of investment considerably higher than it would be if consumers were making the decision. It is also clear that it is higher than in the Western nations.

If this hypothesis is granted, it follows that one would have *expected* the welfare of city dwellers and peasants alike to remain at a low level, as it did. It then becomes irrelevant to condemn collectivization because conditions obtain which are to be expected even though they are "bad" from our point of view. How does one account for the fact that grain exports were much higher in the early 'thirties, when famine was rampant, than in the late 'twenties when conditions were relatively good? I think the answer is that, in the minds of the Soviet planners, foreign exchange and the import of machinery were more important than added welfare which had to be foregone.

In a preview of Jasny's volume, M. K. Bennett illustrates the poverty of the Soviet economy with the following comment: "A well-to-do nation is prone to devote a rather large fraction of its grain supplies, whether domestic or imported, to the feeding of cattle, hogs, and poultry, which produce the animal products which well-to-do populations can afford to eat. Here in this country [the U.S.A.] we use 72-81 per cent of the weight of our total grain crop as feed for animals. . . . In the Soviet Union it was not possible even in a good crop year like 1927-28 to use more than 33 per cent of the grain crop as feed; and the bulk of this was used to produce essential animal draft power. The Russians have no recourse but to eat nearly all the grain they produce. They cannot afford to process it into edible livestock products."⁶ It may very well be that this situation prevails because the Soviet planners want it to prevail: it is much more economical of land and labor to consume grain directly instead of putting it through animals. Although consumer satisfaction suffers (at least we should consider this to be the case), the economy permits resources to be diverted to investment and this may be more important to the Soviets.

Jasny states early in his book (p. 33) that "the socialization drive in agriculture achieved to a large extent its major economic purpose of serving as a basis for the industrialization drive. But this is about all it did achieve, . . ." My contention here is that this is all it was designed to achieve, and that its "success" or "failure" can more appropriately be judged by the increased output of steel, coal, petroleum, railroad construction, than by the peasant's standard of living. On these scores, as Jasny points out, one can scarcely call the experiment a failure, since rates of increase in the output of the basic heavy items were extraordinarily high.

Jasny goes on to say that "everything developed in a distorted way, under conditions incompatible with a permanent sound economy" (p. 33). By

⁶ M. K. Bennett, "Food and Agriculture in the Soviet Union, 1917-48," *Jour. Pol. Econ.*, Vol. LVII, No. 3 (June 1949), pp. 188-89.

this he apparently means that agricultural output lagged and that the food base was a precarious one. This is true only if there is something "normal" in the relationships in capitalist countries between consumer and capital goods industries, between voluntary savings and the rate of investment. The Soviet economy is certainly different in these emphases, and since the war this difference has continued.⁷ But that these conditions are incompatible with a sound permanent economy seems to me as questionable a value judgment as some of the notions of Soviet economists about the inevitability of the downfall of American capitalism. They are conditions arising from policies we neither practice nor admire in this country, except possibly in wartime, but this does not mean they cannot be used by the Soviets to achieve their own particular goals.

III

In the foregoing paragraphs I have taken issue with two matters of interpretation in Jasny's volume. First, the labor productivity developments in Soviet agriculture seem to me, under all the circumstances, to indicate that the problems were well enough on their way toward solution by 1938 so that real progress (over and above the not inconsiderable achievements already made) might have been expected if the war had not interfered. My inference here is that a restoration of the war losses (probably by 1950) will see a resumption of that progress so that the release of labor to industry will again become rapid. Industrial growth, therefore, may be expected to resume.

Second, the fact that the welfare of the peasant (and the urban dweller) did not increase between 1928 and 1938 seems to me not to be open to dispute, but does not seem an adequate criterion by which to judge the success or failure of the socialization of agriculture after 1928. I hold that welfare is a concern of the planners only to the extent that they might anticipate political or social unrest if it is kept too low; except for this they are interested in how much of their resources they can divert to investment, and progress in that sector, therefore, is the criterion that should be used.

Finally, these pages have been devoted to the development of points of view contrary to those implicit or explicit in Jasny's volume. But all this should not submerge my very great admiration for Jasny's present volume—he has amassed data and developed it in such a way that our knowledge of the Soviet agricultural situation is enhanced manyfold. For this we are all greatly in his debt.

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Soviet Civil Law. Vol. I, *Comparative Survey.* Vol. II, *Translation.* By VLADIMIR GSOVSKI. (Ann Arbor: University of Michigan Law School. Volume I, 1948. Pp. xxxvii, 909. Vol. II, 1949. Pp. xx, 907. Each vol., \$10.00. Both vols., \$15.00.)

⁷ Cf. Abram Bergson, "The Fourth Five Year Plan: Heavy versus Consumers' Goods Industries," *Pol. Sci. Quart.*, Vol. LXII, No. 2 (June, 1947), pp. 195-227.

The Law of the Soviet State. Editor, ANDREI V. VYSHINSKY. Translated from the Russian by HUGH W. BABB. (New York: Macmillan. 1949. Pp. xvii, 749. \$15.00.)

The works reviewed here represent most substantial additions to the English literature on the nature and content of Soviet law. Because of the nature of the Soviet state and its economy, the economist concerned with the organization and operation of that economy must be a close student of the changing body of law governing it. The fundamental dominance of the Soviet state in economic matters is provided in the 1936 Constitution, while the actual course of economic affairs is directed by a vast host of legislative enactments and administrative decrees. The economic plan, which governs the detailed course of productive activity and thus replaces to a large extent the market and price system of free-enterprise economies, is formally a law though it is not enforced in the same fashion as, say, the law against theft.

Dr. Gsovski's two-volume work is by far the more valuable and more useful of these two publications from the point of view of an economist interested in the legal aspects of the Soviet economy. Volume I is divided into two general parts. Part I is a general survey of the political development of the Soviet Union and of its political, economic, and social legislation. Economists will be most interested in Chapter 3 which discusses the general characteristics of the Soviet economy. Chapters 5 and 6 provide a helpful general background regarding the Soviet concept of law and its differences from our own. Part II of this volume contains a series of discussions of particular topics in the total area of Soviet civil law, most of which deals with the legal governance of economic conduct. In Chapter 8 the economic historian will find a description of the legal background of the transition from the pre-Soviet to Soviet rule of the economy, including such topics as the legal bases of nationalization and of the continuity of pre-Soviet international obligations. Chapter 9 discusses the position of private rights under Soviet law, including such matters as the right to organize enterprises, to select an occupation, and to conduct small-scale business. The status of aliens and foreign corporations under Soviet law is covered in Chapter 10. The legal position of state institutions and enterprises, including both those under the state budget and those operating on a business basis (*khozraschet*), is defined in Chapter 11. The laws governing contracts and torts are discussed in Chapters 12-15, while Chapter 16 is a particularly valuable discussion of property law, including such topics as an evaluation of the status of private ownership in Soviet legislation, patent law, and copyright law. Chapter 17 treats of inheritance law, while Chapters 18-21 discuss all phases of pre-Soviet and Soviet agrarian legislation. Labor law is the concern of Chapter 22 which summarizes trends in enactments governing wages and hours, labor discipline, and the use of compulsion in the utilization of the work force.

Volume II is devoted almost entirely to the translation of the major pieces of Soviet law together with brief annotations regarding this legislation. Part I reproduces the basic Civil Code of the RSFSR, largest of the Soviet republics; Part IV gives the enactments covering government quasi-corpora-

tions; Part VI that determining the position of foreign firms and trade missions in the USSR; Part VII the patent and copyright laws; Part VIII, agrarian legislation; Part X, labor law, and Part XII, the law governing state secrets and their definition.

Throughout his discussion in Volume I, Dr. Gsovski emphasizes the great changes which have taken place in fundamental Soviet thinking regarding the organization of that society. Thus he points out that in 1929 a Soviet authority asserted "Sale and purchase will never become socialist . . . and socialism does not recognize any sale and purchase." Yet today all economic activity in the USSR is based on sale and purchase of commodities and services. As late as 1935 inheritance was condemned in Soviet theory, yet three years later a law textbook argued that in the USSR, inheritance had lost its "capitalistic" character and was to be regarded as a desirable institution. In 1927, the government sought to encourage a form of collective farming, the commune, in which private property elements were virtually eliminated; by 1930 the standard type of collective farm had become the *artel* in which there is a small but significant sector of private production. Throughout these discussions Dr. Gsovski emphasizes the struggle between Soviet leaders' preconceptions of the society they were trying to build—the result both of Marxist-Leninist ideology and somewhat naïve misconception of the real nature of economic problems—and the realities with which the regime had to contend. The result has been considerable concessions to the realities so that, in the author's opinion, the Soviet system does not "fit exactly any anticipations of socialists, Marxians, or non-Marxians which antedate the Russian revolution. Marxism remains the official philosophy of the Soviet leaders, yet the present order has features which would have been condemned in the earlier stages of the Soviet regime as incompatible with this philosophy" (I, p. 108).

An adequate criticism of Dr. Gsovski's work in detail would require a competence in the area of Soviet law which no economist can claim. Within the limits of this writer's knowledge, it seems clear that the quality, scope, and balanced tone of this monumental work place all students of Soviet society—not least among them the students of the Soviet economy—in great debt to its author.

To anyone having Gsovski's volumes available, there is comparatively little of a substantive nature regarding Soviet law or the Soviet economy that will be added by reference to the work edited by A. Y. Vyshinsky, the leading figure among Soviet legal theoreticians and presently also Soviet foreign minister. This latter book is chiefly interesting for its presentation of the official Soviet point of view—the party line—on all matters discussed. Mr. Vyshinsky rewrites history to suit his needs—as in his allusions to the roles of Trotsky, Rykov and Bukharin—and falsifies the facts regarding conditions outside the Soviet Union as exemplified by the following typical quotation:

. . . in the U.S.A.—though constitutions in a number of states grant parents the right to bring up children not only in any religion whatever but also outside any religion—the upbringing of children in a religious spirit is in reality predeter-

mined by the fact that religion is taught in schools, that atheist teachers are hunted out of the schools, that court proceedings are instituted where Darwinism is taught, and so on (p. 606).

In describing the Soviet Union he relies completely upon the official myths and stereotypes regarding conditions there even if the essential reality peeps out in the very next sentence as in this quotation:

Man cannot feel himself free unless his home is secure from arbitrary invasion . . . Hence it is natural that, guaranteeing the personal inviolability of a citizen of the USSR, the Constitution says: "The inviolability of the homes of citizens and the privacy of their correspondence are preserved by law." (Art. 128). Inviolability of the citizens' homes consists chiefly in their homes being *guaranteed against any violent invasion whatsoever*. Only representatives of the state may, in cases defined by law, *enter a citizen's home without his permission* when this is necessary to assure state security (p. 632, italics supplied).

The discussion of Soviet and non-Soviet economics in this volume is on the same level as the quotations cited above, with unemployment cited as the dominating characteristic of capitalism, and the authority of the toilers working for their general enrichment considered the peculiar virtue of the Soviet system. *The Myths of the Soviet State* would have been a more realistic title for this volume.

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Turkey: An Economic Appraisal. By MAX WESTON THORNBURG, GRAHAM SPRY, and GEORGE SOULE. (New York: Twentieth Century Fund. 1949. Pp. 324. \$3.50.)

This is the second of three studies (the others are Greece and Brazil) prepared under the auspices of the Twentieth Century Fund to acquaint Americans, with the economic institutions and problems of undeveloped countries. As the first comprehensive economic analysis of a Middle East country, it marks a milestone in American economic literature. While the survey was planned before the announcement of American aid to Turkey and before "Point IV," the material provides a useful discussion of the difficulties confronting those two programs.

Max W. Thornburg, an engineer who headed the Twentieth Century Fund research team in Turkey, went to the Middle East fourteen years ago. As chairman of the Board of Engineers of the Standard Oil Company of California, he was instrumental in the oil development of the Island of Bahrein. During 1947 he travelled in Turkey, talking with responsible officials, examining mines and steelworks, observing farmers and studying other economic resources. His preliminary conclusions on how American skill and investment might help develop Turkey's economy were published in *Fortune* in October, 1947. This final version, released more than eighteen months after the investigations, shows the mark of Graham Spry, economist and writer who added sections on history, foreign trade, and agriculture. A considerable amount of editing was done by George Soule.

The factual and analytical material is influenced by the explicit assumption that Turkey will want to use American economic aid and will therefore want to change its institutions along lines designed to make the aid effective. The volume shows how Turkey can best become eligible for continued economic assistance from the United States. Mr. Thornburg and his team recorded numerous instances in which more effective exploitation of the country's resources calls for greater scope for private enterprise, an almost exclusive reliance on domestic capital, and better legal protection for businessmen.

In attempting to generalize from the observed facts, Thornburg presents a vividly detailed picture of the Turkish economy supported by forty statistical tables. The first two chapters cover the historical and institutional background of Turkey's economy, including a brief glimpse at the political superstructure, useful for informational purposes but unrelated to the economic material which makes up the bulk of the book. Chapter 3 on agriculture attacks the economic policy which neglected the welfare of the four-fifths living off the land. While the description of the unwatered, unfertilized primitively cultivated farms illustrates the singular immobility of the agricultural resources, the authors show convincingly what could be accomplished with modern techniques adapted to the country's conditions. Much of the chapter is devoted to a thorough description of the great variety of farming operations, including state farms, and possible methods of improvement.

In contrast to the basic philosophy of the study, the state is singled out as the most effective social body to transform the "Turkey of the oxcart" into a replica of the Imperial Valley. With the aid of agricultural credit, state buying agencies, and other governmental devices, agricultural production has made substantial advances in the last twenty-five years, even though it does lag far behind the advance in industrial production. Even Thornburg doubts how private enterprise in the American sense can build railroads and central irrigation installations in the face of the tremendous physical and institutional difficulties.

The descriptive material in Chapters 4, 5, and 6 on transportation, communications, mining, manufacturing and energy resources completes a picture of Turkey's economic life not available elsewhere in the United States. (In 1948 the British government issued a 228-page volume on economic and commercial conditions in Turkey as one of HM Stationery Office's overseas economic surveys.) It is the contrast between the new Russian-built spinning and textile mills at Kayseri, on the one hand, and primitive agriculture in Anatolia, on the other, which prompts the authors' elaborate criticism of the allocation of resources and the design and efficiency of industrial establishments. The gulf between backward agriculture and isolated examples of misused twentieth-century industrial techniques leads the authors to conclude that the more pedestrian demands for basic utilities, primary processing and light manufacturing establishments must be filled first if the advances in production are to last. The authors' suggestion that pro-

duction of "food, tools, clothing and building material will come before soap, and this before storage batteries and cellophane" could well be addressed to a score of governments which are trying to jump from the primitive to the modern.

The economist will find his meat in Chapter 7 on the "economy in monetary terms" which offers the most useful material of all, although it suffers unnecessarily from the absence of statistical data for the years after 1946, except for those on the government debt and budget. (Such data are available from the Economic Cooperation Administration's *Turkey; Country Study*, the International Monetary Fund and the U.S. Department of Commerce.) Although this lack may be excused, the weaknesses in analytical treatment are less easily explained. Despite the authors' insistence on the dual character of the country's economy, advances in income and production in the commercial and industrial sector are unduly deflated by dividing the cash income (admittedly originating almost exclusively in this sector) by the total number of inhabitants. In using this conventional device, the authors arrive at a *per capita* income for 1944 only 10 per cent greater than that of 1938 (both expressed in 1938 prices), although production in coal, lignite, electrical power, and tobacco substantially increased during that period. The conclusion is substantiated, however, that the rise in productive capacity and income in the last ten years affected only the fringe of Turkey's economy.

The treatment of the country's financial organization fails to give a clear picture of the domestic savings and investment situation. An examination of the relation of the amount of savings to the propensity to save and the pressure for better living would have been valuable. The use of savings is also only casually discussed. In the face of the authors' discounting the contribution of private capital to Turkey's development in the past, one wonders whether full use was made of the available statistical material. The monthly bulletin of the International Monetary Fund for September 1949 shows that investments of private banks in non-government securities or bonds doubled between 1944 and 1948 while the government assets owned by those banks remained constant over the same period. Whatever the private banks' share in the country's finance, it is apparent they participated without hesitation in the credit expansion during the second half of the war and the postwar years. As to the future, the authors seem to realize what the situation is. For, despite the numerous institutional obstacles, they consider "an indefinite amount of private capital" would be available if small and light industries were encouraged.

The treatment of the national budget and debt suffers from a reliance on sketchy data. The statement that increased government credits were raised from the public can hardly be reconciled with the doubling of the Central Bank's advances to the government between 1939 and 1946. (They were reduced in 1949 by using the profits accruing from the devaluation in September, 1946.) The discussion of the foreign debt (which most students of international economics will anticipate because of the Ottoman debt's historical significance) is incomplete largely because data for the increasing American

loans to Turkey were not taken into account. (The balance of these loans as of June 30, 1949 amounted to \$55 million with an additional \$52 million authorized for later disbursement. If fully utilized, the American credits would add 50 per cent to the authors' foreign debt figure and 30 per cent to the estimated annual service charge.)

A regrettable gap in the discussion of Turkey's foreign trade is due to the disregard of the reversal of Turkey's trade balance with the United States in the last part of 1946. It has remained negative and is now partly financed by ECA loans. ECA's operations and Turkey's place in the Intra-European Payments plan are not covered. Had these and other more basic elements, including the propensity to import and the movement in the terms of trade, been considered, the authors might have been better able to evaluate the 1946 devaluation and Turkey's current balance-of-payments position.

The analysis of inflationary forces and the contribution of the large export surpluses between 1943 and 1946 are only mentioned in passing.

That the authors nevertheless consider their over-all picture of Turkey's economy "clear enough" confirms this reviewer's impression that they were more concerned with political, social, and economic institutions and their contribution to economic development than with economic variables in the technical sense.

The complexities with which a central government planning and investment organization is confronted in Turkey are illuminated in Chapters 8 and 9, a summary of the authors' criticisms and recommendations. They contain a memorable defense of the function and contribution of the entrepreneur, the small trader and the owner of small savings who has not had much scope to increase his economic effectiveness by applying his ingenuity, capital, and workmanship. The modern corporation gets a passing word of praise as a useful business form in later stages. Believing in the basic dynamism of the Turkish scene, Thornburg is optimistic about Turkey's economy, provided there "is a fundamental change in the attitude of those who exercise political control so that the economy is operated in the interest of the people rather than the job holders and a single-party bureaucratic machine." Most readers will want to agree with this conclusion. But the question of how to bring about such changes without plunging Turkey into political upheavals remains unanswered.

Even if one does not accept the authors' premise about the place of free enterprise in an underdeveloped Middle East country, one cannot fail to be impressed by the lucidity of the presentation and the persuasive pointing up of the problems. As an economic appraisal, the volume reveals the need for bringing to bear tools of recent economic analysis on the economies of backward areas. It is to be hoped that this need can be impressed on American advisers to the governments concerned, including Mr. Thornburg who is now economic adviser to the economic planning board of the government of Iran.

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Studien zur Geschichte des Deutschen Imperialismus, Vol. I, Monopole und Unternehmerverbände. By JÜRGEN KUCZYNSKI. (Berlin: Dietz Verlag. 1948. Pp. 403.)

The author intends to publish a series of studies on German imperialism. In the presentation of facts, factors, and judgments he admittedly wishes to break with traditional forms of history writing. This introductory volume of the series deals with monopolies and trade associations since, in the opinion of Mr. Kuczynski, German political and social life was decidedly influenced by "monopolists," and these "monopolists" are principally responsible for the imperialistic trend in German political development.

The volume consists of three chapters: (I) Monopolistic Organization, (II) Trade Associations, and (III) Agricultural Organizations of Capitalists. An Annex contains a bibliography on German publications on monopolies by Miss Hildegard Alberts.

The first chapter contains a discussion of the "Theory of Monopolies." An enumeration of the subtitles of this section may convey some idea of its scope: (1) Classes of monopolies; (2) Origin of monopolies; (3) Monopolistic objectives; (4) Origin of monopolistic profits; (5) Monopolies create new monopolies; (6) Accumulation of capital, rationalization, technological progress, utilization of resources; (7) Prices, production and crises; (8) Tariffs, foreign trade and capital movements; (9) Monopolies and banks; (10) Why are monopolies the carriers of reaction?; (11) Economic power of monopolies.

What the author considers monopolistic "theory" has little in common with the field of knowledge so designated in western countries. Apparently, the author restricted the scope of his study to "capitalistic" monopolies (p. 36). Mr. Kuczynski does not consider the competitive market economy as the desirable pattern for producing and marketing goods. His main objection to monopolies and monopolists is that they block through abuses of economic power such political developments as are desirable from the point of view of left-wing socialism.

The ideological foundation of Mr. Kuczynski's book may be found in Lenin's study on *Imperialism*. According to Lenin, "Monopoly is the transition from capitalism to a higher order. If it were necessary to give the briefest possible definition of imperialism, we should have to say that imperialism is the monopoly stage of capitalism. . . . Imperialism is capitalism in that stage of development in which the domination of monopolies and finance capital has taken shape; in which the export of capital has acquired pronounced importance; in which the division of the world by the international trusts has begun, and in which the partition of all the territory of the earth by the greatest capitalist countries has been completed."¹ As Lenin did, Mr. Kuczynski sharply repudiates the political conception of those German social democrats who welcomed the monopolistic developments of capitalism as steps in the direction of socialism. Monopolistic

¹ Quoted from V. I. Lenin, *Imperialism, The Highest Stage of Capitalism* (London, 1934), pp. 80-81.

developments serve reactionary purposes unless they arouse revolutionary labor movements. The author expresses satisfaction over the results achieved by the Communist Party of Eastern Germany in dealing with monopolists and monopolies including the Party's achievements in theoretical research in that field (p. 157). Mr. Kuczynski places the responsibility for the political division of Germany into an Eastern and Western Region on German "monopolists." He regards the present "monopolists" of Germany as disloyal to their country as their predecessors were before 1914 ("... die gleiche Vaterlandslosigkeit sich auch bereits vor 1914 bei den deutschen Imperialisten zeigte, bei den Industriemonopolisten sowohl wie bei den Junkern" [p. 22]).

No doubt, the German economy before 1945 was profoundly pervaded by monopolistic ideologies and mechanisms. These ideas and practices were very important factors in shaping German political developments, including imperialism and totalitarianism. In the first volume of his work the author has not attempted to analyze what direction German politics would have taken in the absence of monopolistic ideologies and organizations, nor does he discuss the peculiarities of a "German" monopolist in contrast to a "non-imperialistic" monopolist.

The first volume of Mr. Kuczynski's work does not contain factual material based on new research. Regrettably, the author could not take advantage even of the material published in the United States during and after the Second World War on German monopolies. The author's conclusions do not open the way to a new evaluation of German imperialism. Perhaps later volumes will throw more light on the ideological foundations of German capitalistic "imperialism."

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Economic Systems; Planning and Reform; Cooperation

Socialism. By PAUL SWEENEY. (New York: McGraw-Hill. 1949. Pp. xiii, 276. \$3.50.)

Paul Sweezy surveys socialism under three main headings: (1) its present status as a going-system, with special reference to the USSR, U.K., and Eastern Europe (attention is focused here on the development and present rôle of socialist institutions in the different countries considered and also, depending on the country, on various other pertinent topics); (2) the development of socialism as a political movement and doctrine, with special reference to Marxism; and (3) the great debate, including particularly the controversy over incentives, rational allocation and freedom under socialism. The third volume to appear in the new Economics Handbook Series edited by Seymour Harris, the survey clearly is intended as an introductory statement. In view of the author, however, it is bound to be of interest to students of socialism generally.

Sweezy writes "from the standpoint of a socialist." The aim, however, is "to instruct, not to persuade." Many readers, including some socialists, will

feel nevertheless that the survey is often controversial. Thus, on the important question of socialism and freedom (Chap. 12), the discussion skillfully exposes many misconceptions, but viewed as an independent appraisal rather than a dialectical exercise seems in turn open to serious criticisms. Sweezy, of course, is right that comprehensive planning should be possible with freedom of choice (pp. 241 ff.); and that fears about political freedom based on an assumed lack of economic freedom in this sense can not be given much weight (p. 250). What, however, of the monopoly control over employment opportunities and the means of information? Having in mind the complexities of human nature, many are much more concerned about these aspects of comprehensive planning but, regrettably, Sweezy neglects them altogether.

No doubt he is right, too, that the suppression of freedom is not a part of basic socialist doctrine (pp. 250-51), but again, of the obviously important question of socialist tactics there is no mention. And while the unfavorable circumstances in Russia certainly must be taken into account in appraising the experience of that country in regard to socialism and freedom, it hardly is permissible to discount this experience altogether, as Sweezy seems inclined to do.

Perhaps, then, the prospects for freedom under socialism, or at any rate under the socialism evolving out of some types of socialist movements, are at least a good deal more conjectural than Sweezy implies. To those who prize freedom, this in itself can constitute an impelling basis for rejecting such movements.

In regard to the USSR, by the way, Sweezy interprets the labor controls introduced in 1940 as "emergency measures" connected with the war situation (p. 28). This theory has been stated before, and may well be right. It should have been pointed out, however, that the labor controls are still in effect. The so-called Labor Reserve School System, involving a draft of youths for vocational training and subsequent compulsory allocation to jobs, is supposed to be the main source of semi-skilled and skilled labor under the Fourth Five Year Plan (1946-50). Possibly the Russians now have in mind to maintain these controls only for the duration of the reconstruction period. Yet other wartime measures, such as rationing, have already been abolished. At the same time Soviet writers themselves speak of the labor draft in particular as if it were an established rather than emergency feature. There seems to be a real possibility, then, that some or all of the controls will acquire a semi-permanent status.

Questions also will be raised about other aspects: such as the characterization of recent developments in Eastern Europe, albeit with the proviso that there is a "socialist encirclement" of this area, as illustrating the possibilities of a "peaceful transition to socialism" (p. 130); and this description of Soviet and Anglo-American policies towards the European resistance: "The Russians encouraged resistance movements to take over while giving particular support to their socialist elements. . . . The British and Americans, on the other hand, used their power to restore representatives of the old ruling class to positions of authority and helped them to disarm the resistance movements" (pp. 189-90). As to how such matters as the crushing

of a major part of the Polish resistance, the de Gaulist movement and the Anglo-American support of Tito fit into this simple scheme, there is no indication.

But it would be easy to give undue weight to the shortcomings of this book. Sweezy has compiled a good deal of interesting information, and one can readily find here details on such diverse subjects as the postwar land reforms and nationalization measures in Eastern Europe, the current program of the British Labor Party, the Second-and-a-half International, and the "competitive solution" to socialist planning. To recur to Sweezy's aims, the book certainly is informative. It is also excellently organized and exceptionally lucid. In reducing to the dimensions of one readable volume the story of a great and dynamic social movement, Sweezy has performed a valuable service. Nonsocialists as well as socialists are in his debt.

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Economic Planning. By SEYMOUR E. HARRIS. (New York: A. A. Knopf. 1949. Pp. xvii, 577. Text, \$4.50.)

This is a very useful book because, first, rather heroically braving the risk of getting out of date with current developments, it puts together, as conveniently as possible in a 600-page volume, a comprehensive sample of economic "plans" (each with a brief commentary); and secondly, it vigorously emphasizes the aggregative as against the allocative economics of planned systems.

The first of its merits makes a start in changing the treatment (at least for use in teaching) of the subject which still either pads "Principles" texts as Chapters XXX to XXXIII (for no more apparent reason than that there are just 30 weeks in a full-year course), or is treated in "isms" texts of preposterous volume and provoking institutionalistic "objectivity." The second merit would seem to be a very necessary attempt to keep up with the planning practitioners. Meritorious as the work of Barone and Lange was, its concentration on allocative economics (natural enough considering when it was published) has the danger of leading into a theoretical cul-de-sac so long as no more empirical data about the effectiveness and coverage of the price mechanism in both unplanned and planned systems are available than now.¹ Beyond the elegant formulations of welfare economics in Bergson's and Samuelson's hands and the embarrassing road block of accepting interpersonal incomparability of satisfactions there seems to loom the awful realization, dimly acknowledged, that the comparison of allocative efficiency between planned and unplanned systems is a rather precarious undertaking, because we do not really know much about either.² On the

¹ It would seem to me therefore that one of the most important points made in the most recent contribution to this general subject, Professor Bergson's "Socialist Economics" in the A.E.A. *Survey of Contemporary Economics*, is that of stressing the need for investigating the economics of planning under conditions of "High-tempo industrialisation" (*op. cit.*, p. 440) and fixed technical coefficients (*op. cit.*, p. 443).

² Professor J. A. Schumpeter's *Capitalism, Socialism and Democracy* is the only real exception.

other hand, it becomes perfectly clear from Professor Harris' book that the dominating theme of whatever economic plans there are is precisely "high-tempo industrialisation," (one can put this, as Professor Harris does, as "Planning is a product of misfortune," p. 27)—whether after a devastating war or generally as a program for "underdeveloped areas." That Professor Harris' own contributions to this volume should be concerned with introducing the set of economic questions which this theme raises is perfectly proper and sets a good precedent.

The layout of the book, accordingly, is as follows: a brief Introduction, Part I (pp. 12-96) is an attempt to discuss the major aggregative planning problems (full employment, productivity, inflation, etc.); Part II (pp. 98-554), the bulk of the book, contains Professor Harris' selections from major planning documents of some 16 nations; Part III (pp. 556-76) is a rather unsuccessful attempt to win the race with current history: it contains brief notes on the fate, 1947-1949, of the plans described in Part II.

The general scheme, thus, is attractive enough. The details of Part I are replete with that comprehensive flood of statistical data and bibliographical references, often suggestively and rather daringly arranged and interpreted, which one has come to expect of each addition to the astonishing literary output of Professor Harris. But they often lack system and precision, and there is a disturbing rush for coverage.³ The four problems of unemployment (Chap. IV), productivity (Chap. V), industrialisation (Chap. VI) and inflation (Chap. VII) would have formed a solid enough block of topics to take on by way of an introduction, to say nothing of that vague subject which takes two brief (1-2 pages) and equally unsatisfactory bows as "Liberty and Incentives" (p. 6) and "Freedom and Incentives" (p. 16). "Inflation" and "Dollar Shortage," both equally complex matters, make similarly double appearances (p. 33 and Chap. VII, pp. 34 and 90-93), and the burden of reassembling is hard on the reader. Resource allocation is, indeed, mentioned, but a two-page (pp. 12-14) coverage is worse than none (almost equal space is given to the repeated assurance that we have so far lived in abysmal ignorance of the economics of planning).

The general result is that really important issues are less adequately dealt with than the space which their discussion takes would have permitted. What Professor Harris says under the heading of Industrialization may serve as an example. It is true that "Rapid industrialization is one of the prime objectives of many of the planned economies" (p. 56). But it would seem to be rather ambitious to evaluate what facts have been assembled on industrialization patterns—relationships between income *per capita* and industrialization, Colin Clark's relationships between industrialization stages and labor force distribution over primary, secondary, and tertiary industries, Ezekiel's Table on industrialization speeds (p. 317)—in so little space as

³This editorial rush seems to be the only possible explanation of why a section heading of the Japanese White Paper of 4 July 1947 should have slipped into the position of a section heading of Chap. IV—what, otherwise, would the subtitle (p. VII) "Programs for Securing Articles for the Use of Miners" have to do in the chapter on Full Employment and Unemployment?

Professor Harris allows himself. The discussion altogether does not dispel too easily an optimism about the effects of planned industrialization, an impression which is only partially corrected in Part III when Professor Harris has to record for country after country that many ambitious schemes had very largely to remain on paper. This should have been no surprise after the sober account of development schemes by the U.N. Economic Affairs Department⁴ and in particular after the Report of the FAO Mission to Poland whose major conclusion was that, for the development of underdeveloped areas radical agricultural improvements are both possible with relatively small resources and a necessary precondition of industrialization. The problem of population pressure (the "Malthusian specter") cannot simply "be erased by population control, migration or industrialization—one, two, or all three of these" (p. 68)—or, at least, the matter is more complicated than such a statement would imply. It is, finally, perhaps less than fair to ask for some introduction to the political and social implications of planned development in a volume centered on the economics of the matter. But how important these implications are, and how necessary some treatment of them would be, is indicated in the almost classical statement of the "Reasons for Nationalising Branches of National Economy" by the then Polish Minister of Industry (pp. 448-52).

"The Plans" (Part II) range all the way from the U.S. Employment Act of 1946 and the Economic Reports of the President to the Fourth Five-Year Plan of the USSR. Though the width of this classification may either disturb, or confirm the worst apprehensions about economists, of some readers, there is no question that the comparison of the use of national budget accounts between the United States, the United Kingdom and such countries as Norway and the Netherlands for planning or generally policy purposes is highly instructive. Professor Harris' procedure is therefore particularly welcome. The sections on Poland, Czechoslovakia, Hungary and Argentina could have been shortened somewhat, and the space thus saved used for brief summaries of the economic position of the respective countries, in order to give a more adequate background for the evaluation of the plans concerned: as they stand, they make the dull reading of the pedantically improbable, and there is no way of gauging whatever chance of success they may have. This applies even more to the section on the USSR—without some more detailed account of Soviet economic development, the Stalin Five-Year Plan alone gives very little insight indeed into recent Russian economic planning.

It is repeated that on the whole this is a useful book on a topic of urgent importance and enormous range; further serious treatment of it should certainly follow the direction thus set, and much clearly remains to be done.

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Die Geschichte der Lage der Arbeiter in Deutschland von 1880 bis in die Gegenwart. Vol. II, 1933-48. By JÜRGEN KUCZINSKI. (Berlin: Verlagsgesellschaft die Freie Gewerkschaft. 1948. 2nd ed. Pp. 292.)

⁴ *Economic Development in Selected Countries* (October, 1947).

Die Theorie der Lage der Arbeiter. By JÜRGEN KUCZINSKI. (Berlin: Verlagsgesellschaft die Freie Gewerkschaft. 1948. Pp. 308.)

The two volumes are part of a set of publications describing the history of the situation of the working class under industrial capitalism. The first attempts to describe the situation of the German working class in the period of National Socialism. About one-third of the book is devoted to a description of the author's views of the structure of Nazism as the most complete embodiment of the system of monopoly capitalism. "Fascism is nothing but the dictatorship of the reactionary elements among the monopolists." The other two-thirds of the book is a compilation of statistical and other data, compiled in part from secondary sources, concerning wages, hours of work, productivity, social insurance, and conditions of health of the German wage earner in the three periods. The first period lasts from the beginning of the regime until the outbreak of the second World War, the second until June 1941 when Germany attacked the Soviet Union, and the third from 1941 until the breakdown of the regime.

The facts are selected and presented so as to prove the author's initial assumptions. Historical facts which might prove the contrary, such as the resistance of banks, manufacturing industries, and wholesale and retail trade against the rise of Hitler are omitted. The author, who looks at Soviet Russia as the restorer of a democratic Germany, forgets the ominous rôle played by the Communist party in destroying German democracy. He does not mention that during the last free elections in Germany in November, 1932 Communists and Nazis together waged a transportation strike in Berlin against the Democratic government. He considers the cleavage of the working class one of the causes for the rise of Nazism but forgets that the Communists at that time had concentrated their fight against the Social Democrats, called by them Social Fascists.

The book on the theory of the working class which forms the seventh and last volume of the set is based on assumptions which may be called fundamentalist Marxism. Ideologies in the beginning of an epoch, says the author, are of frank brutality, to be followed by a period in which facts are falsified to conceal the malignancy of the system. In the last period the governing class develops a cynical Herren theory, while the class destined to supersede it has a clearer insight into the situation. In the case of Marxism, the theory is no longer ideology, because it gives the correct analysis. Examples for theories, defending the *status quo* by explaining poverty as willed by God or sole basis of progress can easily be found. Their description is followed by an exegesis of Marxism without recognition of any criticism.

Mr. Kuczinski's task to prove the truth of the increasing misery of the working class in the era of capitalism is not an easy one; he endeavors to do so by shifting the emphasis from the wage earners in England and the United States to the colonial people belonging to the British Empire. Vital gaps in the argumentation are filled by value judgments. Thus the author does not prove his statement that the "percentage of illiteracy among the worker exploited by English capital is much higher than it was 50 or 100 years ago." Nor does he distinguish between technical and social causes of

the phenomena he describes. He blames capitalism for the inability of the wage earner to have a clear insight into the production, financing, and price-fixing processes. Trade unions, he claims, are unable to prevent the increasing misery of their members.

In the selection of post-Marxian theories, those of Franz Oppenheimer and Eduard Heimann are omitted—they don't seem to fit into the author's scheme. Like the first volume, the seventh is full of misunderstandings. Its deductions are not less one-sided and founded on initial assumptions than those of any Nazi writer.

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Theorie der Allgemeinen Wirtschaftspolitik und Wirtschaftslenkung. By THEODORE PÜTZ. (Vienna: Verlag für Geschichte und Politik. 1948. Pp. 318.)

Since the 1930's the literature on various kinds of modification of a *laissez-faire* economic order has increased greatly. The book under review is another attempt to find a way out of the dilemma of the chaotic and unbridled versus the regimented economy.

Many writers of such literature have had the ungrateful task of fighting such ingrained concepts as "rugged individualism" and other emotional appeals with which even reputable economists have been afflicted. Therefore, it is not surprising that many of these authors are doubly careful to assure their readers that nothing contained in their books may be construed to mean an abridgement of individual freedom or an abandonment of cherished ideals. It is interesting to note, however, that the writer of this book, who is professor of economics at the University of Innsbruck, Austria, in a country with a longer tradition of anti-*laissez-faire* thinking than ours, should also be ridden by those apprehensions. Professor Pütz shies away from using the expression "planned economy" both in the title and in the text of the book, though this is clearly the thing that he is writing about, since, as he says, ". . . the term 'planned economy' (*Planwirtschaft*) appears to us improper, because in political and scientific discussion it has been too closely connected with the system of Soviet economic policy and Marxian socialism" (footnote, p. 137, my translation). Instead he substitutes the term "directed economy" (*Wirtschaftslenkung*), or what the French would call *dirigisme*.

According to the title this is to be a "Theory of a General Economic Policy and Directed Economy." Proponents of a planned economy may not find much consolation in this volume, because aside from its unevenness and bristling repetitions it lacks the concise analytical reasoning demanded by a critical audience.

The book is divided into two parts; the first deals with the theoretical foundations of general economic policy and the second with the theory of a directed economy. The author's first argument is that economic policy is not only a matter of political action, but also is a science in itself. In order, therefore, to give his theory a scientific basis and objectivity, Professor

Pütz begins by tackling the problem of value judgments. After examining the emancipation of the economic science from value judgments by Sombart and Weber in the beginning of the 20th century, he concludes that economics is more than a structure of causes and effects and more than a tool without any intrinsic objective. Sombart and Weber went too far and for the "sake of truth" certain judgments of value are admissible in science. Otherwise, for instance, could one in jurisprudence dispute the motto "might before right"?

The author divides value judgments into three major categories: ideologic, teleologic and ontologic. Since the first is clearly of a purely subjective nature it has no room in science. While teleologic value judgments pass on the appropriateness of means toward an objective, the ontologic judgments deal with the final objectives of the economy. It is the latter judgments that are hard to swallow by economists imbued with the sanctity of objectivity. Professor Pütz's argument runs somewhat like this: man's existence is characterized by scarcity. That is, his environment (as conditioned by nature) offers him only in inadequate manner the necessities that he needs to secure his life and mental development. Therefore, to increase the possibilities of living, both physically and mentally, is the task of economics. In other words, the national welfare (*Volkswohlstand*) is the inherent objective of the science of economics, just as the preservation of life could be regarded the inherent objective of the medical science. (Of course, since Adam Smith's *Wealth of Nations*, "welfare" in one form or another has been taken for granted as an economic objective in many works, either expressly or implicitly, but too often without being defined or rationalized.)

Subordinated to this final objective of national welfare are intermediary objectives such as: optimum productivity, full employment, equitable distribution, priorities of wants, etc., all of which the author discusses in detail. Because under a *laissez-faire* system the economy cannot attain those ends for reasons which Professor Pütz restates in a convincing manner, the argument concludes that thus an objective foundation for economic policy has been established.

In the second part the author first examines the concept of a "directed economy." He defines economic planning as a tool of economic policy and distinguishes it from government interventionism: interventionism is an outgrowth of interest group politics, where the government institutes economic measures as special concessions to the pressures of certain groups. Since those piecemeal interventions have no rationale they have many unconsidered secondary effects that are unwanted and conflicting. In order to offset those undesirable effects, more and more interventions become necessary so that the result may be a rigid and closely regulated economy which might not be the case were the economy directed by systematized and coordinated planning. Government interventionism is called the last stage in the decay of economic liberalism. Professor Pütz, however, does not regard a "directed economy" as a pure economic order or system in itself, but it is a mixture of the only two pure forms: the perfect *laissez-faire* economy and the centrally administered collectivist economy. The directed economy distinguishes itself

from the latter by maintaining the capitalist structure and basing itself firmly upon the principle of what the author calls "restrained freedom" (*gebundene Freiheit*)—"restrained," to differentiate freedom from license. Thus Professor Pütz manages to place his directed economy in opposition to both a *laissez-faire* and collectivist economy but not to capitalism.

The other chapters deal with the methods of the directed economy, which include a discussion of the various types and the "where" and "how" of planning. A consideration of these points will take us beyond the limits of this review, but it should be mentioned that the author seems to be acutely aware of the needs for flexibility and the limitations of planning, and his analysis, though long-winded, is thorough and quite mature. Unfortunately, the book contains a great deal of ethical and moral sermonizing which, perhaps, may be best illustrated by the quotation from the German poet Matthias Claudius which the author cites to make one of his main points: "He is not free who wants to do what he wishes, but he is free who can do what he ought to do" (p. 236, my translation).

The book may not succeed in being a theory of general economic policy and a "directed economy" but, in spite of its many shortcomings, it presents a very complete and systematized discussion and classification of economic planning. As such, it is a valuable contribution.

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National Income and Social Accounting

An Introduction to National Income and Income Analysis. By RICHARD RUGGLES. (New York: McGraw-Hill, 1949. Pp. viii, 349. \$3.75.)

In the first part of this book Professor Ruggles introduces the student to the National Income concepts that are now used by the Department of Commerce. Then dealing directly with the income accounts discussed in Part One, he presents in the second section an analysis of the mechanisms involved in fluctuations in the national income. The approach is unusual and interesting; students who come to the study of National Income economics with a business or accounting background may find the treatment especially helpful.

Obviously one could introduce these income concepts with a dictionary definition, but to the student such an approach would read rather like a cookbook. Professor Ruggles, however, has adopted a less direct but more meaningful starting-point. After describing briefly the business firm's statements of accounts, its Balance Sheet and Income Statement, he shows how a production statement for the single firm can be derived. He then discusses some of the problems encountered in drawing up a combined statement for the whole economy and shows that what is obtained gives a significant measure of economic activity; it is, of course, a statement of the Gross National Product by Allocations and Sources. He then introduces the accepted modifications of the basic statement, presenting the various income concepts both for the whole economy and on a sector basis. After working through these chapters the

student should have a good understanding of these concepts, when any are to be used, and so on. The whole presentation is clear and orderly.

The income analysis which makes up the second part is also done from an unusual standpoint. The analysis is based squarely upon the national income accounts, and the conceptual apparatus ultimately required—for instance, the consumption function and the marginal efficiency of capital—is introduced only later. This, from the student's point of view, may make for clarity. Nevertheless, the analysis seems to me to be less well realized than the material in Part One.

For one thing, unless one is very careful the whole complicated problem of income determination is made to look deceptively easy. The effect upon the national income of a change in any sector, for instance in the government's tax policy, is traced by showing how it may be expected to affect the accounts of the other sectors. It seems to be a simple matter to work through the Household and Capital, Business and Foreign accounts, to add the appropriate figures here and there, and to come out with an answer, but actually without the information that is subsumed in the Consumption and Investment functions, or, of course, in some other manner, no answer except "it all depends" is possible. The income accounts are useful for leading the student to the operationally useful concepts, but by themselves they are inadequate for handling any real problem. This may be illustrated by Professor Ruggles' handling of the policy of altering wage rates to relieve depression. "The classical economists maintained that lowering the wage rate would create fuller employment because producers would be willing to hire more labor at a lower wage rate. . ." But a "lower wage rate may not lead producers to hire a significantly larger number of workers, so that the new wage bill . . . may be smaller than the old. A decline in consumers' expenditures would then follow, and the cumulative movement downward would be intensified" (p. 321). That is to say, employment will not increase unless it increases (enough). But this is not meaningful analysis, and to get an answer, or even to get the information needed for an answer, we must use other concepts.

Other minor matters; one might question whether it is desirable to define the consumption function so that it assumes constant prices, and an unchanging (whatever that is) distribution of income. If, for instance, "it is probably impossible for the economy to move along the consumption function" because "a change in the level of disposable income invariably causes a change in relative prices" (p. 253), then what is the use of the concept? Naturally the effects of changing relative prices must be considered; is it not advisable to include these effects, if possible, in the consumption function?

On the slope of the marginal efficiency of capital schedule; are we justified in concluding that it must be inclined very sharply and hence that a large change in the interest rate would have only a small effect upon capital expenditures simply because "the interest rate is only a minor part of the costs of most producers, so that even a large change in it would not affect total costs very significantly" (p. 264)? The marginal efficiency measures the expected rate of return over and above costs *aside from the cost of interest* to be yielded by an investment expenditure. Whether the interest cost is normally

high or low, it would not affect, I believe, the frequency distribution of yields of all potential projects.

But these are actually small matters. Professor Ruggles wrote this book for the teacher; he does not claim to have presented new material. As a teaching device, I believe the book has a great deal to commend it, especially the unusual and sensible organization and the clarity of the presentation. Though there is no mention of Keynes throughout, it succeeds in presenting an acceptable outline of Keynes' theory simply and accurately.

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Business Fluctuations; Prices

Les Crises Économiques. By HENRI ARDANT. (Paris: Flammarion. 1948. Pp. 442. 475 fr.)

This is an ambitious study from a Marxist point of view of the problem of depression. The treatment is both descriptive and theoretical. On the descriptive side, the United States and Russia have exclusive billings. The United States is portrayed as a country of immense productive capacity but of slower rate of growth than Soviet Russia, and constantly threatened by economic crisis even when the deluge is not upon her (Parts I and III). Russia is shown as in phenomenally rapid industrial development and without crises (Part II). As to theory, though Marx dominates the stage, a wide variety of past and current economists are at least mentioned (Part I). Keynes gets two pages (159-62). The crisis is said to have passed from a quantitative matter to a qualitative matter for the United States. There are quotations evidencing the neurotic fear of depression common among us, and armaments and gifts and loans to support foreign markets are seen as the crutches of a sick order.

The book is a success: it does what the author wants it to do. It is readable—a virtue that could stand cultivation among economists—and it is plausible. It gives orthodox doctrine with, so far as I can see, only one qualification—Russia is debited with severe restrictions on human freedom (p. 429). This alone will not please the faithful. But the liberal democrat can survive its message, and the more economic training he has, the more likely he is to survive completely unscorched. A virtue of the book for such a reader is that it invites him to consider why he is not converted.

1. There are the small points. Ardant relies too much on proof by quotation, and those he has lighted upon among liberal economists are plainly not representative of their thought. He has seized upon a special kind of quotation with delight and displayed it out of context to prove his case. Boulding, Ezekiel, and Arthur F. Burns, among others, are credited with statements carrying no laurels for the system called by Ardant "capitalism."

The Gerschenkron data for Soviet production used (p. 362, *Review of Economic Statistics*, November 1947) are given without the warning of upward bias insisted on in the source. And they are data for industrial production only, without the heavy weighting that agriculture deserves from several points of view in a country like Russia, and that makes a chart of

Soviet production a painful thing for a comrade to contemplate. Colin Clark, for his new edition of the *Conditions of Economic Progress*, concludes that over-all Soviet productivity today is about at the level of 1900.

There are the sillinesses of the list of "capitalist contradictions" (p. 427). Any problem can be portrayed as a contradiction. An attractive list can be thought of for the Soviet system in any odd ten minutes—from an international ideology harnessed to national power, on down—without the overlapping, partial truth, and plain error of Ardent's listing.

2. There are the basic troubles with the Marxist theoretical system (pp. 130-140), classically portrayed, for example, by Schumpeter in his *Capitalism, Socialism, and Democracy*. If the foundation fails, the superstructure of crisis theory cannot stand.

3. The unpleasant fact that all social organizations have their weaknesses—that men must choose among relative goods—is not faced: specifically, the problem of political power in a centralized economy and the logic of the process of gaining and keeping power, freedom of choice versus central planning, and economic errors of the bureaucracy. Haberler has recently argued that serious errors are more likely under centralized control than under decentralized private-firm decisions, though errors of deficient purchasing power are likely to be more quickly corrected. The case is strong, too, that whether or not a mixed economy has a chronic tendency to deficient buying power, the political facts of life for a centralized economy tend toward chronic inflation. In Russia, the crises of 1921 (general), 1930-32 (agriculture), 1934-36 and 1936-38 (purges) have a logical origin in the dynamics of dictatorship. They exist despite the advantage that Ardent claims for this new and very old world, the lack of sentimental handicaps (p. 429). The theory of crises in a dictatorship is nearly as susceptible of development as the theory of crises in present-day mixed economies—at least if ambitions of mathematicians to work it out are sternly checked.

4. Finally, there is the appealing but unconvincing simplicity of the Marxian analysis: economics rules the world, people are divided into Marxian classes, and they behave as they are supposed to behave. The subtlety of history is adequate for such theories. The normal expectation is that history holds sardonic surprises for the faithful, and that the Marxian structure will eventually seem, like other simple doctrines, not so much wrong, as irrelevant and passé.

The liberal democrat who thinks the mixed economy of the west serves the public interest relatively well, who has no faith that history is predestined, and who hopes for the evolution of the mixed economy to serve the public good more effectively still, can learn from Ardent's book. The principal targets of the Marxist are inequality, monopoly, and most of all unemployment. These are grievous faults, and they can and should be vigorously and effectively attacked. On the matter of depression, there is obvious political sense in carrying measures to achieve high employment much further than an economic calculus of costs and returns would justify alone.

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Money and Banking; Short-Term Credit; Consumer Finance

Monetary Management. By E. A. GOLDENWEISER. (New York; McGraw-Hill. 1949. Pp. xiv, 175. \$2.75.)

This small book (63 pages is Appendix) is sponsored by the Committee for Economic Development and "is a predecessor to a larger volume which will discuss more extensively the problems and potentials of monetary action."

In the preliminary part of the book there are incisive comments about the rôle of money in our economy, about the efficacy of monetary measures, about the available agencies of monetary control and the relationship of the federal reserve system to these other agencies. All this takes up about a third of the direct writing. The remainder of the book, aside from a closing chapter on International Monetary Factors, is devoted to an appraisal of federal reserve policies, as manifested by the combined use of the System's specific powers, in selected crucial situations, with particular interest displayed in current problems resulting from the decision of our monetary authorities to try to stabilize the market for United States Treasury obligations.

Anything that comes from the pen of Dr. Goldenweiser about monetary matters in general and about Federal Reserve policies in particular deserves the close attention of economists. There is so much in this little book, as it stands, however, to which I, the reviewer, dissent, that I regret we have to wait for the fuller rendition.

Many of my criticisms stem from the fact that the vast knowledge of the author seems in spots to be directed towards making us complacent with respect to Reserve Board delays and wavering, and its narrow conception of its responsibilities. This, of course, is the sort of criticism that frequently arises in the case of men with a high sense of loyalty to their associates, and possessed of so much understanding that sharp, decisive remonstrances are difficult to render.

As an illustration of my dissatisfaction, however, we may begin by putting on record the fact that Goldenweiser admits the evils attributable to conflicting monetary authorities and supervisory agencies in the field of banking. Not the least of these evils, as I see them, is the fact that this dispersion of supervisory authority affords the Reserve administration opportunity to minimize attention to developing faults in our banking practices and to hide behind the formula that the System's responsibility is merely to exert some slight influence at propitious moments upon the "cost, the supply, and the availability of bank credit." Under this formula the Reserve administration, the beneficiary of tremendous financial and intellectual support, seems largely to have escaped censure for failing to demand action by Congress that might have led to better bank bond portfolios prior to 1932; for neglecting to call adequate attention during the decade of the 'Twenties to the growing plight of poorly capitalized country banks subjected to an increasing degree of city bank competition; and for pressing with inadequate vigor, in the period preceding the crisis of 1920, the campaign to warn the bankers of the misuses of the trade acceptance. Goldenweiser knows all these things but, in the matter of

the responsibility of a clumsy supervisory system for unsatisfactory conditions, he contents himself by suggesting that it might be well if Congress should legislate the same reserve requirements for nonmember state banks as for member banks.

Many other illustrations might be provided of the failure of the author to condemn severely the Reserve administration's lethargies and its acceptance of a strict interpretation of the System's obligations. I find in his work only indirect criticism of the over-long reliance upon the theory of eligible paper as a test of discounting. Nothing is advanced about the mistake of putting off until 1932 the revision of the provisions regarding collateral for federal reserve notes, a delay that made it inappropriate for the System to undertake an aggressive policy of manufacturing large surplus reserves for member banks until late in the greatest of all depressions. Instead, and as an apparent justification for a reverse type of action, tightening discount rates in the fall of 1931, Goldenweiser says the critics should know that at that time the public couldn't be told the facts about the immensity of Europe's liquid assets that might be withdrawn from our markets if rates remained low. To this, the man in the street couldn't help but ask why, under these circumstances, the System didn't make vigorous efforts at an earlier date to get the Glass-Steagall Act of 1932 on the statute books. As I see it, the record of the System at critical periods of time simply is not pretty and shouldn't be whitewashed by the application of a restrictive philosophy of the System's responsibilities. What we thought we were getting in 1913 was a real tribunal of finance and our failure to get it has long been the occasion of great disappointment among economists. Particularly true is this of those economists who believe that modern theory encourages efforts to find the causes of depressions in the wrong places.

In the chapter on "Crucial Policy Decisions" I cannot escape the opinion that the choice of incidents may have the effect of warding off legitimate criticism. The first complete exposition of the Federal Reserve Board, and the most elaborate in its Annual Reports, regarding the fundamentals of general credit policy and the necessity of making large use of production indices, the 1923 formulation, isn't even mentioned. Neither are we told why this policy was soon superseded by the 1924 policy which, as testimony has it, was developed primarily in the New York Reserve Bank. In so far as this policy of 1924 had international implications and was designed primarily to assist Britain to return the pound to \$4.86, we are told: "in retrospect the . . . action . . . seems to have been a mistake" because too much deflation was later required of England. Perhaps this is correct. Nevertheless, the facts are that after 1920 the farmer's economic position had been greatly impaired and interior banks were under severe pressure to liquidate their heavy borrowings at the Reserve Banks. A high pound would improve those export conditions to which agriculture has always been sensitive and the large Reserve Bank purchases of governments could reasonably have been justified on ground of the necessity of stemming the tendency of banks to liquidate farm mortgage paper. Let the reader recall that there was then no system of grain support

prices. The Strong 1924 policy was about the only farm relief program there was. Furthermore, the follow-ups to the 1924 policy which Governor Strong had envisaged were not destined to be carried out.

Anent 1927 Goldenweiser says that the credit easing measures of the summer of that year seem more defensible than in 1924 because there then occurred an outflow of gold which offset to a considerable extent the effect of the System's open-market purchases. In my writings I have tried to establish that if there had not been procrastination within the System the easing efforts would have been applied at a time in which there was no offsetting outflow of gold.

In respect to the policy of the System while the bull market was drawing to a close, there is no mention of the Board's pronouncement that the System should intervene in order to keep the security market from "absorbing" credit that ought to be preserved for commerce and agriculture. Perhaps the decision to base intervention on this ground was not fundamental. But, to go on, Goldenweiser tells us that after 1929 "the Federal Reserve carried on a policy of monetary ease interrupted only by a brief period of credit stringency in the autumn of 1931." The reader of these lines will certainly want to refresh his memory as to how much credit ease was then imparted. I think he will conclude that the Reserve Banks then went little further in applying the oxygen than to try to get the average member bank reasonably well out of debt. Certainly there was no intent to create surplus reserves large enough to permit bond liquidation to proceed in a more orderly manner.

In a communication to economists some reference should be made to the definition, both conceptually and statistically, of money. I agree with Mr. Homer Jones that the word should be dropped from scientific terminology. Difficulty seems to stem from the fact that many economists never seem to know whether they are referring narrowly to those specialized instruments customarily employed to discharge monetary debts or whether they have in mind something broader that provides liquidity. One can do strange things with his statistics if he adopts the latter conception but stops short of including items that satisfy liquidity just as thoroughly as do some of the designated items. (For an illustration see Hansen, *Monetary Theory and Fiscal Policy*, in which along with time deposits of commercial banks there are added postal savings and mutual savings bank deposits, but not shares of Savings and Loan Associations, stabilized Treasury savings bonds, short-term certificates of indebtedness, etc.) In the time-deposit category Goldenweiser includes only those of commercial banks. So he avoids the error, assuming that other liquid assets are left out, of mingling types of time deposits whose manufacture has dissimilar effects. But what is here objected to is the following statement of page 10: "the record is that indications for monetary policy based on changes in the supply of money are usually the same, whether the money supply be measured by demand deposits or total deposits." Whether this latter statement can be accepted depends on the reader's interpretation of the meaning of the word "usually." Certainly, there have been important exceptions.

On page 77 we read that "A surplus of current receipts by the Treasury in 1947 over expenditures contributed an anti-inflationary factor in the situ-

tion." Privately I have quarreled with the Division of Research and Statistics about its obligation to show that the truth of this statement depends upon how the funds extracted from the private sector of the economy were used (whether to retire securities held by ordinary banks, by the Reserve Banks, or whether the proceeds were left as idle Treasury balances). Apparently Goldenweiser joins those who believe it unnecessary for the reader to understand the complete process. This contributes to a simplified exposition but it has the fault of encouraging the reader to make mistakes in analyzing other situations.

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American Banking System—A Sketch. By R. S. SAYERS. (Oxford: Clarendon Press. New York: Oxford Univ. Press. 1948. Pp. v, 130. \$2.00.)

Professor Sayer's little book, designed to give the British student a reliable condensed view of the American Banking System in one evening's reading, is eminently successful in its purpose. In fact, the author has contributed one of the most effective compact descriptions of our banking organization thus far available in the literature. Considering an author's license appropriate to a sketch, the volume maintains a neat balance of discussion between banking structure and function and between commercial banking and central banking. If one can criticize the treatment at all, it is not at the level of over-all plan and content but at the level of particulars.

The author's skill in telescopic generalization at some spots does less than justice to the subject matter and at other places leaves the reader with an incorrect impression. Also, the author's background and interests result on occasion, perhaps excusably, in putting certain aspects of our banking mechanism somewhat out of focus. While space does not permit a detailing of such points in this review, the following citations afford examples which will strike the attention of American readers: The author's reference (p. 9) to the political aspects of locating the Board of Governors in Washington rather than in New York; his description (pp. 10-11) of the rôle of New York in the contemporary correspondent banking mechanism; his generalization (p. 25) with respect to chain and group banking; his reference (p. 34) to the background of Federal Reserve policy with respect to the bond market; his comment (p. 36) on the présent status of the banker's acceptance bill; his comment (p. 41) on the prewar importance of "accounts receivable" paper; his observations (p. 74) respecting the Federal Reserve freedom from international monetary influences in the 'Twenties; and his citation (p. 85) of the wartime reduction in Reserve Banks reserve requirements as an indication of our chronic disposition to keep free from the shackles of a gold standard.

The author has undoubtedly prepared his text from a voluminous study of the American literature. There are remarkably few outright errors in the text and these might well have been eliminated by a prepublication reading of the manuscript by a qualified student on this side of the Atlantic. A few flagrant items may be noted. Chicago has more than two banking offices in its central

district (p. 23 and again on pp. 115-16); it has at least eleven—including the stockyards within the central district, thirteen—and there are 67 banking offices in the entire city. Again, Federal Reserve maximum interest rates on time and savings deposits apply only to member banks, not all commercial banks (p. 47). Since early 1947, Reserve Bank earnings paid to the Treasury have been more than "small" (p. 53). There are no large excess reserves "under present circumstances" (p. 70). Lastly, the provision of working capital to war contractors was not done under Section 13b of the Reserve Act, but under a war powers Executive Order (March 1942) with the Reserve Banks acting as guarantors for the respective armed services, (p. 106).

RALPH A. YOUNG

Washington, D.C.

Die Deutsche Geldwirtschaft. By FRITZ FEDERAU. (Berlin: Walter de Gruyter & Co. 1949. Pp. 96. DM 4.00.)

This is a brief but comprehensive study of monetary, credit, and fiscal developments in Germany since the inter-war currency reform of 1923-24. The backbone of the little book is a series of statistical estimates. Starting with some broad national aggregates such as total money income and the aggregate supply of long-term loanable funds (*Geldkapitalbildung*), Dr. Federau proceeds to present a statistical analysis of the assets and liabilities of the German central bank (Reichsbank), a consolidated account of the balance sheets of the commercial banks, savings banks (Sparkassen), credit cooperatives, communal real estate and agrarian long-term credit organizations. In each case there are brief comments on basic trends and changes such as, for example, on the movements of the scale and composition of central bank reserves (including gold), the growth in central bank note circulation and the volume of bank-deposit money. As elsewhere, the last war has accounted for a conspicuous increase in the rate of growth of the supply of circulating media. Also, Federau's statistics show the tremendous increase in savings deposits occasioned by the combination of inflationary methods of war finance and commodity rationing and price controls. A special section deals with the recent history of the central governmental budget. Public revenues and expenditures, public borrowing and the growth of the national debt are analysed.

Despite its modest dimensions and the fairly elementary level of discussion this study is bound to be of great value to the German public. It reduces an informational gap occasioned by the political circumstances which prevailed during the Hitler regime. The importance of the statistical estimates for the current generation of bankers, businessmen and economic students is, of course, somewhat lessened by the current territorial division as well as by the postwar monetary reform which created a new basis for the order of magnitude of the money stock, the total volume of private indebtedness, savings, income, etc. However, most of the current figures cannot be understood without consulting the financial data of the past since the monetary reform of 1948 proceeded in terms of a straight percentage reduction in most of the aggregates involved. Thus, for example, the total volume of bank notes and bank-deposit

money for all four occupational zones was reduced to one-ninth of its original (June, 1948) figure, *i.e.*, from 240 billion RM (Reichsmark) to 27 billion DM (Deutsche Mark).

WALTER EGLE

University of Cincinnati

Business Finance; Investments and Security Markets; Insurance

Corporation Finance. By WILFORD J. EITEMAN. (New York: American Institute of Banking, 1948. Pp. vii, 354.)

The American Institute of Banking is probably the oldest, certainly the longest continuous, and without doubt the best attended undertaking in adult education in America. Since its beginning in 1900 over 30,000 bank and trust company employees have been granted certificates evidencing the completion of evening courses in accounting, bank administration, business management, business law, economics, finance, and real estate. About 45,000 students are currently enrolled. A semester-course runs from eleven to fourteen weeks, two meetings of one and one-half to two hours per week. Students normally take one course per semester. A young man could enter in 1950, for example, proceed at the normal pace, and receive the graduate certificate in Commercial Banking, Trusts, or Investments in seven years. Teachers are drawn from both practitioners and professors in the fields that are offered. Its textbooks have come from two main sources: standard college texts and texts which the Institute itself has prepared and published. Some of the latter have been written by professors. In general, to date, most of the Institute's own textbooks have been regarded by professorial critics as too concise and too concentrated, hence superficial.

The volume under review may be similarly regarded by the casual observer. But a teacher who reads it, realizing the while that there are, after all, other ways to teach than to assign thirty pages and then lecture for fifty minutes on the same subject matter, will be impressed with how good a discussion could be built about the points which Professor Eiteman has capably covered in twenty-one chapters and 332 pages. (The value of such a discussion would be enhanced, it should be granted, by the fact that the Institute's students spend their non-classroom hours in the workaday world.) Every major segment of the subject is treated, and in good balance. Of necessity the author has been sparing of verbiage. Without fawning before the shrine of semantics he has demonstrated that the basic English of finance is adequate for its exposition. He has been analytical and explanatory rather than descriptive. He has concerned himself with principles and policies. His commendable brevity has not even prevented him from contributing several new analytical devices, his treatment of trading on the equity and the relationship of revenue and expense to assets and surplus, to wit. Charts and graphs have been generously and intelligently employed and the questions and problems which follow each chapter thoughtfully prepared. It is unfortunate that this book is not available for general distribution. A copy should somehow be obtained, however, by

anyone about to write another college textbook in corporation finance and its economy of expression seriously observed.

W. BAYARD TAYLOR

Claremont Men's College

International Economics

Economic Survey of Asia and the Far East, 1948. Prepared by the Secretariat of the Economic Commission for Asia and the Far East. U.N. Pub. No.: 1949. II.F.I. (New York: Columbia Univ. Press. 1949. Pp. xviii, 289. \$2.00.)

With the increasing importance of the Far East in public policy and area research, the deficiencies of economic information on that region become more and more serious. This handicap is very evident in the current planning for the United States' "Point Four" program and the United Nations' Technical Assistance program; and it is crucial to the various proposals for regional cooperation and even integration in the Far East, paralleling the current exhortations to Western Europe. Underlying the regional proposals are certain assumptions as to the actuality and the potentiality of economic interdependence among the countries concerned, and these assumptions must be tested against the facts, in Asia as we are now beginning to do for Europe, if we are to avoid foolish extremes of naïveté or defeatism in this regard.

A debt of gratitude is therefore owed to the United Nations' Economic Commission for Asia and the Far East, which has undertaken to assemble the available economic information on the Far East from a variety of sources—chiefly governments and international agencies but including numerous unofficial sources—and for making the compilation available to the public. In effect, the *Survey* carries forward the widely used reference work which the Institute of Pacific Relations published in 1934 (*Economic Handbook of the Pacific Area*) and extended in 1941-42 (*Economic Survey of the Pacific Area*, in three Parts). The ECAFE staff has made noble attempts at historical comparability, relating the current data to prewar patterns so far as possible.

The 1948 *Survey* is the second in a projected annual series. It follows the same general lines as its predecessor in coverage and organization, with certain changes which on the whole are improvements. Basic characteristics of Asia's economies, somewhat dispersed in the 1947 volume, are now collected in an introductory section separate from the annual phenomena. There is a very handy summary of Salient Changes Since the War. Conspicuous gaps in the earlier volume, notably on financial and price matters, have now been filled in good measure by the inclusion of new topics and greater detail.

The chief deficiency of the *Survey* continues to be the absence of adequate accounts of the internal structure and process of the economies in question. On the one hand, we need to know more about production costs, distribution costs, profit rates, personal saving and real capital formation, and the interrelations of foreign and native enterprise; on the other hand, we need more information on agrarian economics, relevant to the revolutionary movements now sweeping through Asia, and particularly relevant to the outlook for land

reform as distinct from improvements in agricultural productivity and progress in industrialization.

The organization of the material, basically by topics rather than by countries, reflects ECAFE's concern with "regional" issues. But this approach in a survey of the area perhaps contributes more to confusion than to clarity, in view of the large variations from country to country, the controlling importance of the national economic unit, and the limited degree of interdependence among these units at the present time. Possibly a more adequate and useful presentation might be organized country by country, with uniform treatment of each, supplemented with an over-all discussion of intra-regional and inter-regional relations.

The technical handling of the data in the present volume is in general painstaking, and reveals an admirable self-restraint in not trying to make more of certain information than its vague or dubious character would justify. Defects in the raw data are minimized by emphasis upon trends rather than upon absolute values, but this cannot entirely avoid certain distortions; for example, the inclusion of the entrepôt trade of Singapore and Hong Kong exaggerates the degree of intra-regional trade among Far Eastern countries excluding Japan, and correspondingly understates Japan's pre-war rôle in drawing those countries into a trade network. Many of these defects can be remedied only through improvements in governmental statistical services and through special studies, both of which are being sponsored by ECAFE.

Meanwhile, this Survey will be an invaluable handbook in a field of much ignorance and confusion. Within its limits, it represents a noteworthy growth of cooperation in Asia through a United Nations agency.

EDWIN P. REUBENS

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Esquisse d'un Tableau Économique de L'Europe. By CHARLES BETTELHEIM.
(Paris: Domat. 1948. Pp. 356. Fr. 570.)

Charles Bettelheim, who was formerly director of research and statistics for the French Ministry of Labor and now director of research at the École Pratique des Hautes Études has written a book of considerable interest for the economist and not without its political overtones. Bettelheim's method is to study the self-sufficiency of Europe in foodstuffs, raw materials and industrial products, and their abundance in relation to the population, in a series of tables. His conclusion is that Europe must import the first two and export the last. He then analyzes the disintegration of Europe since 1890, and its origins in tariff policy, the divisive peace settlement of 1919 and monetary disorders. From these facts and analysis, he concludes, perhaps abruptly, that Europe's economic future lies in expanded East-West trade, including trade with the U.S.S.R., since it cannot compete in dollar markets except by reducing its real income and since the Marshall Plan is a mere palliative to support European consumption without righting fundamental disequilibria. This trade must be developed on the basis of a wide trading area in Europe discriminating against the dollar bloc.

It is not necessary to agree with Bettelheim's thesis to find the book a provocative one.

C. P. KINDLEBERGER

Massachusetts Institute of Technology

Customs Unions—A Tool For Peace. By LEOPOLD KOHR. (Washington: Foundation for Foreign Affairs. 1949. Pp. 64. 75c.)

In this pamphlet Dr. Kohr deals with a problem which has been of increasing importance during the last few years but which has received little serious attention in the press and public forum—the problem of customs unions. This discussion consists of three principal parts: a survey of the history and the theoretical implications of customs unions; a review of recent moves towards the establishment of such unions; and the texts of a few of the most important agreements in this field.

Dr. Kohr emphasizes the fact that customs unions have been of considerable importance during the last century and a half. Contrary to the popular impression, these agreements have by no means been confined to Germany. He lists more than thirty such accords in three continents. Several of these were preliminary to or concurrent with the German Zollverein, which itself lasted from 1833-1871. However, among the other notable customs unions were those between Austria and Hungary, the South African Customs Union of 1889, the Belgium-Luxembourg union of 1922 and the Benelux union based on the agreement of 1947.

A number of the accords which are listed are pacts involving colonial areas—such as those between French India and British India, between Syria and Lebanon (in 1922), Palestine and Transjordan (1928), Nigeria and British Cameroons, and Ruanda-Urundi and Belgian Congo. Still another category of agreements consists of accords between large powers and their very small neighbors, such as the customs unions of Austria and Liechtenstein (and since 1923 of Switzerland and Liechtenstein), between France and Monaco, and Italy and San Marino.

One of the most interesting and important parts of this study is the discussion of various "errors" in current thought concerning customs unions. Dr. Kohr is particularly anxious to stress the point that customs unions are not a necessary forerunner of political unions. He argues that although the states included in the Zollverein ultimately fused into the German Empire, the Zollverein itself did not contribute to this development. He insists that in several instances the existence of the Zollverein actually deprived the Prussians of arguing points in urging a closer political union. One might comment that the author tends to underestimate the importance which working together on economic matters may have for paving the way toward joint efforts in the political field.

In giving a precise definition to "customs union," the author of this pamphlet has undoubtedly done a distinct service. He says: "A customs union is the complete economic fusion of two or more territories under different sovereignty (or, at least, enjoying separate political autonomy) without prejudice to their political status." This rules out of consideration "customs

unification" or the creation of a single customs area under a unified political administration on the one hand; and mere "free trade agreements" abolishing customs barriers between two or more states but not setting up a completely unified customs front to the world outside of these states, on the other hand.

This pamphlet, written by the man responsible for the Carnegie Endowment's monumental collection of customs union documents of 1815-1947, is one which should be read by all those who desire to be better informed concerning widespread moves towards the formation of unified economic groupings in Western Europe and elsewhere throughout the world.

ROBERT J. ALEXANDER

Rutgers University

Industrial Organization and Markets; Public Regulation of Business

Business and Government. By MARSHALL EDWARD DIMOCK. (New York: Henry Holt and Company. 1949. Pp. xv, 840. \$4.75.)

This volume is a welcome addition to the growing, but still sadly short, list of acceptable texts in the area of government regulation of economic activity. Designed "to serve the requirements of all courses on business and government, no matter where they are offered," this stout book (816 pages of text) presents a comprehensive analysis of the subject which breaks through the arbitrary barriers surrounding individual disciplines that relate to public economic policy. Following in the path of the mighty Aristotle, who never for an instant thought that politics and economics could be separated, the writer combines "knowledge from the fields of political science and economics and, to a lesser extent from the other social sciences . . . to help explain problems and policies in which these ingredients are joined."

The coverage of the book is broad, in keeping with the scope of business-government relationships of today. The introductory chapter deals with "Tensions and Issues." The remaining twenty-eight chapters are divided into nine groups as follows: "The Limits of State Intervention;" "The Challenge of Recurring Depressions;" "Labor and Government;" "Government and Agriculture;" "Monopoly, Free Enterprise, and the Crisis in Public Control;" "Public Utility Regulation;" "Financial Controls;" "Government as Owner and Conservator;" and "Competing Forces in a Mixed Economy." The treatment includes a chapter on "Business-Government Relations in Other Countries," and "The Cooperative Movement."

This book is successful in bringing together the scattered threads of a bewildering complexity of problems and factual materials into a broad presentation which can be grasped by the average student. Most chapters, in good textbook style, begin with a few introductory observations about the problem to be discussed and end with a summary of the materials presented. The substantive treatment adeptly combines historical, theoretical, and comparative analysis. Good use is made of the case method. The "telegraphic form," or short outline presentation of a vast body of information (such as the legislative history of railroads and legislative landmarks in conservation policy) is used advantageously. The pattern of analysis does not depend upon

a single methodology. Rather, a combination of methods is tailored to fit the demands of the many different problems of public policy with which the text deals. The net result is a skillful brushing aside of unessentials to get at the heart of a problem and a blending of appropriate tools of analysis to come to grips with the problem at hand.

Bountifully scattered through the volume are succinct and sparkling observations which reveal a penetrating insight into matters of public policy. Ample use is made of quotations from others and generally with telling effect. In some instances, however, Professor Dimock himself might have better presented the essence of a quotation. In the field of government regulation it is of prime importance for the student to know the right questions to ask. The author asks the right ones and peppers them throughout the book. On occasion, fundamental questions are raised which the reader no doubt will wish the author had answered. But these questions, together with the many well-thought out queries set forth at the end of each chapter, should provoke lively and fruitful discussion in the classroom.

Any study of a subject so controversial and broad as the relationships between government and business can hardly completely please everyone. To this reviewer, the economic analysis merits strengthening in spots by a fuller and more penetrating treatment. Cases in point are the analyses of causes of depressions, the operation of the economic system, the problem of size in anti-monopoly policy, the rôle of fiscal policy in a full employment program, fundamental economic issues associated with perplexing national transportation policy, and the problem of wage rates in public policy towards labor.

The architecture of the study could have been improved somewhat by rearrangement of the materials covered and by including some subjects not treated or else touched upon lightly. A firmer basis for understanding the current perplexities of and demands on public economic policy, for example, would be established for the student, in the opinion of this reviewer, if the current goals apparently set by society for its social and economic system had been moved from the last chapter to rest beside the presentation of the goals and operation of the comparatively unrestrained free enterprise system which is presented in Chapter 3. More attention to public stabilization policy would have been profitable. The impact of the depression of the 1930's on political, economic, and legal institutions and thinking might have had fuller emphasis. And finally, some inclusion of post-World War II international economic problems would serve to round out the wide coverage of this volume.

The general approach to the problem of the relationship between government and business, which this reviewer feels is most realistic and profitable, is that of a "liberal, middle-of-the-road philosophy." The point is hammered home that the agenda of public policy "should concentrate on matters of common concern which give most promise of producing an environment in which economic groups can operate with the greatest advantage to themselves and to society." Complex problems involved in better defining the goals of a "mixed economy" and in achieving them are recognized and discussed.

Altogether, Professor Dimock's analysis has been pursued with great skill, clarity of presentation, and healthy balance. It deserves, and should have, wide

use as a text in courses devoted to business and government. Those who read and study it will be well rewarded.

GEORGE A. STEINER

University of Illinois

The Regulation of Industry. By DUDLEY F. PEGRUM. (Chicago: Richard D. Irwin, 1949. Pp. x, 497. \$4.75.)

Professor Pegrum aims for a "somewhat general presentation of the regulation of private enterprise in the United States," (p. vii) presumably to meet the needs of college courses under such titles as: Government and Business, Competition and Monopoly, and the Social Control of Industry. He discusses three phases of government regulation. First, he describes the existing legal, political, economic and attitudinal environment. His purpose is to indicate the features of our institutional environment that condition the kinds of government regulation that are undertaken and their effectiveness. Second, Pegrum discusses the three characteristics of the modern economy he considers most significant for regulatory purposes: the preëminence of the corporate form of business organization, the dominance of most industries by large firms, and sellers' possession of broad discretionary power over price. Third, our administrative experience in regulating "trusts," "unfair competition," patents, and corporate abuses occupies more than half the pages of the book.

Essentially, Pegrum indicates the importance of competition to the survival of our free enterprise economy, describes most of the legislation that increases or restricts competition, assesses the effects of this legislation, and finally recommends methods of increasing the competitiveness of industry.

Pegrum has intentionally restricted himself to fewer topics than are covered by other texts in this field. He scarcely mentions most of the subjects discussed at length by Fainsod and Gordon¹ and in the Brookings Institution volume,² and he gives none of the industrial histories or the equivalent that are contained in Purdy, Lindahl, and Carter.³ This book also is smaller in scope than J. M. Clark's *Social Control of Industry*⁴ in that it does not discuss public utility regulation and possible government measures to moderate business cycles. Despite its limited scope, this book does not offer greater "depth" of understanding or ease of comprehension than the others.

Pegrum's treatment of government regulation is strongly legalistic and historical. He frequently stresses the inexorability of basic social forces and the gradual genesis of social change. That description of current economic practices and arrangements was a minor objective in the author's view, is suggested by the absence of a single statistical table or graph in the entire

¹ Fainsod and Gordon, *Government and the American Economy* (New York, W. W. Norton, 1941).

² Lyon, Watkins, and Abramson, *Government and Economic Life* (Washington, The Brookings Institution, 1939).

³ *Corporate Concentration and Public Policy* (New York, Prentice-Hall, 1942).

⁴ Second edition, 1939, McGraw-Hill.

book. Empirical data are not wholly absent, but references to industrial materials (other than occasional brief mention of situations giving rise to antitrust suits) are infrequent. Even such subjects as price policies are treated largely without concrete examples, so that the discussion is mostly definitional, partly analytical and almost entirely undescriptive. All of the other texts mentioned are more economic in emphasis than this book.

Pegrum argues strongly in favor of the following thesis: All phases of life are being rocked to their foundations by World War II and its aftermath. Pronounced differences of opinion on the means and objectives of economic policy create severe political uncertainty. Impediments to competition and departures from competition strike at the basis of our economic system and unless they are speedily removed, imprudent policies will be adopted.

Pegrum calls for government intervention mainly to curb corporate abuses and to restrain big business, for even though not all corporations and large firms are responsible for "unworkable" competition, they frequently possess monopoly power. (Pegrum implies that competition is, if anything, more vigorous now than it was several decades back [p. 98].) The antitrust laws have failed to achieve all they must and existing arrangements for their administration and the provisions of those laws should be revised. Specifically, our antitrust policy should be vested in a single administrative commission—the Federal Trade Commission—and the federal courts should become involved only on appeal. Our antitrust laws should be modified along the following lines: repeal restrictive legislation like the Miller-Tydings Act, the Webb-Pomerene Act; limit patent rights by compulsory licensing and reduce the privileges granted to patent-holders; limit corporate activities and prerogatives by general prohibitions against such things as intercorporate stock ownership and vertical integration and then allow an administrative agency to grant exceptions to these general prohibitions (at the outset, limit federal control to the very large corporations, specifically 176 firms with assets over \$50,000,000). "The greatest need today . . . is not in the Sherman Act itself . . . but in other laws bearing on industrial control which either contradict the spirit of the Sherman law or fail to supplement it adequately in special situations" (p. 475).

Such means would settle "the issue of freedom versus authority" by a "reaffirmation of the faith of the American people in their heritage and in the capacity of a free people to solve their political and economic problems without sacrificing that freedom" (p. 481). If the issue is not settled along "free enterprise lines," then we will turn to a system of economic planning whose consequences Pegrum describes in the following lurid terms: ". . . it may be doubted that private property has any real meaning if it is eliminated from the field of production. Voluntary associations have no part in the scheme of control; labor unions would have no real functions; and collective bargaining could not be tolerated. Freedom of speech, freedom of expression, and freedom of communication would be literally impossible, because the organs of public opinion could not be politically independent if controlled or owned by the state. Freedom of religion would be nothing short of a myth under such circumstances" (p. 457).

As a text, this book has serious limitations. Its organization and style are blurred and confusing. Very often redundant, ponderous in sentence structure, lacking incisive introductory sentences and frequent informative side-heads, it many times fails to convey the author's ideas. Its limited scope has already been mentioned; especially serious is the omission of public utility regulation. Categorical statements and value judgments are numerous and are presented in a way that leads the student to regard them either as unquestionable fact or as the consensus of informed opinion, even when they are not. Unsupported conclusions recur sufficiently often to "propagandize" the student. The book is not calculated to receive, and does not merit, the confidence of the reader. It will not teach, by good example, rigorous and unprejudiced thinking.

In its treatment of subject matter, the limitations are equally grievous. Most of the discussion revolves around the "competitive norm," which Pegrum himself explicitly discards as inapplicable to the complex modern industrial world (p. 99-100). Although he quotes with favor from Dr. Clark's discussion of workable competition, he does not indicate what he believes to be the earmarks of workable competition. Pegrum seems to feel (he does not take a clear position) that close correspondence between average costs and prices represents workable competition, without reference to whether costs reflect heavy sales promotion, unprogressive production techniques, or unwise initial investment. The treatment of the connection between size and economic efficiency is fragmentary, using a small proportion of the data available. Price policies probably suffer from the most superficial treatment. Moreover, Pegrum himself expects a great deal from an antimonopoly policy and, without supporting argumentation, demands that the reader do the same. Throughout, he implies that relatively minor modifications in our antitrust laws and administrative procedures alone can make a highly efficient resource-allocating mechanism out of existing industrial arrangements.

Nevertheless, Pegrum has written a fairly detailed account of antitrust policy that discusses recent cases in which the Courts have reinterpreted the Sherman Act.⁵ His chapters on patents and international combinations accord more space to these vital subjects than they ordinarily receive. The book presupposes little prior economics training, and it may therefore be especially suited to some courses.

A. R. OXENFELDT

Hofstra College

Land Economics; Agricultural Economics; Economic Geography

Economic Geography of the USSR. Edited by S. S. BALZAK, V. F. VASYUTIN, and YA. G. FEIGIN; American edition edited by CHAUNCY D. HARRIS. (New York: Macmillan. 1949. Pp. xlvi, 620. \$10.00.)

⁵ Teachers may prefer to refer students to several more compact and penetrating treatments of the same subject, however. See E. V. Rostow, "Monopoly Under the Sherman Act" *Illinois Law Review*, Vol. 43—No. 6 (Jan.-Feb., 1949), and M. A. Adelman "Effective Competition and the Anti-trust Laws," *Harvard Law Review*, Vol. LXI, No. 8 (Sept., 1948).

The American Council of Learned Societies has performed a very useful service in having this 1940 Soviet university textbook translated into English. Its value as a source of facts will be discussed below. Non-specialists in the Russian field are likely to be more interested in the book's explanation of the new Soviet location theory, which was formulated in March 1939 at the 18th Congress of the Communist Party.

These portions of the book, however, make frustrating reading. The discussion (accurately translated by Robert M. Hankin and Olga Adler Titelbaum), follows lines of reasoning which are, to say the least, elusive. This is because the major premises are left unstated, and because a more explicit and consistent set of principles would have limited the possible alternatives for government action. The quality of the argument is sufficiently indicated by the central slogan, "Bring industry closer to the sources of raw material *and* to the consuming areas!" which blandly passes over the one great problem of location theory. In spite of the tangential character of the discussion, an understandable reformulation can be distilled out of this and the many other Soviet expositions of the new policy. The following brief remarks, somewhat oversimplified, are offered as a guide.

The Soviet Union had been plagued from 1932 on by a shortage of transport capacity relative to rapidly growing demand. A serious transport crisis in the middle 1930's was overcome for the moment through expansion of traffic capacity on key trunk lines. The government was reluctant, however, to divert resources from heavy industry, and the transportation system remained overloaded. It apparently was clear to Soviet authorities by 1939 that somehow the increasing demand for transportation would have to be checked, or else a large-scale shift of resources from armament industries into new transport facilities would be required. Worse still, the international situation indicated that reserve capacity to handle military traffic might soon be needed. The new policy provided an answer: Promote regional self-sufficiency!

Several other ends were served by this program. Construction of duplicate facilities in the newer regions reduced Soviet dependence on the old industrial region and eastern Ukraine, both vulnerable areas in wartime. Smaller plants, dispersed throughout the country, could be brought into operation more quickly, an important consideration in 1939. Industrial development in outlying regions apparently promoted the government's relations with the non-Russian nationalities of these areas.

Since the industrialization of the USSR had heretofore proceeded to a considerable extent on the basis of regional specialization and large-scale facilities, it was necessary to repudiate the men and doctrines involved. It was not expedient to counter the earlier cost-minimizing analysis explicitly with the cogent arguments summarized above; name-calling had to serve instead. Bearing this in mind, the reader should be able to read through the more apoplectic passages with relative equanimity.

The location theory set forth in this 1940 textbook has been carried over into the postwar period without appreciable modification. A recent article in *Planned Economy*¹ indicates that the authorities are still unwilling to enter-

¹ P. Krylov, "Against Bourgeois Methodology in Problems of Transportation Economics" (in Russian), *Planovoe Khoziaistvo* 1949, No. 4 (July-August), pp. 85-91.

tain discussion of transport capacity or location theory in any other terms. Readers of the book under review will be able to deduce readily the probable consequences for Soviet economic development.

The translators have been careful to convey literally the sense of Soviet terminology. Economists will recognize, of course, that the phrase "distribution of productive forces" has the same meaning as Edgar M. Hoover's phrase, "location of economic activity," i.e., that distribution here carries no connotation of retail activity. "Complex" development of a region means "well-rounded" development, in the sense that ancillary and consumer-goods industries are built up around primary production sites.

The present volume is packed with quantitative data and descriptive material covering the geography, population, industry, agriculture, and transportation of Russia. In addition, Professor Harris and his staff have added to the unabridged Russian text 19 maps, 8 tables, 5 appendices, and 5 indexes, all carefully based on Soviet sources. While the data relate mainly to the 1937-1939 period, with some discussion of changes planned or under way, the volume is still very useful, since geographical aspects of an economy change slowly. Professor Harris has taken pains to supply maps and other information on wartime boundary changes. It is worth noting also that many of the projects finished during the war or contained in the present Five-Year Plan were outlined in the 3rd Five-Year Plan and appear in this book.

Those giving courses touching on the USSR will find at least parts of the book suitable for reading assignments, though certain portions are coldly factual and others abound with extraneous remarks. The instructors themselves, together with all research workers in this field, will unquestionably wish to have the book at hand for reference purposes.

HOLLAND HUNTER

Haverford College

Labor

Labor Economics and Labor Relations. By LLOYD G. REYNOLDS. (New York: Prentice-Hall. 1949. Pp. xii, 552. \$4.75.)

In this remarkably well written text, Professor Reynolds draws on a wide range of knowledge, tackles tough problems with the tools of economic analysis, and frankly states the limitations of his results. Use of the book in a course this Fall has convinced the reviewer that, despite the criticisms set forth below, it is probably the most satisfactory general labor text now available.

Professor Reynolds gives his own well-reasoned views on each subject rather than merely offering a compilation of material selected from journal articles. Because he draws so heavily on his own resources, the chapters are somewhat uneven in quality. Those on the dynamics of union growth (III) and wages (XV-XIX) are excellent. Less satisfactory are the chapters dealing with the growth of a working class (I), labor in politics (IV), and management (VII). The whole subject of industrial management and management's labor policies needs new treatment.

Although the material within each chapter is, for the most part, well organized and presented, the over-all organization of the book is not too satisfactory. The subject matter is treated in the following order and proportions: introductory chapters (55 pages); chapters on trade unionism and collective bargaining, with wages excluded (190 pages); chapters on public policy and labor law (66 pages); chapters on wages, including a few pages on the non-wage consequences of unions (144 pages); and chapters on income distribution and social security (78 pages). The first chapter is not a general introduction, and a concluding chapter at the end is lacking, so that the different parts of the book are not well integrated. The separate treatment of wages after collective bargaining is awkward, and using the wage chapters out of order (a possibility the author suggests) does not remedy the difficulty, partly because the treatment is so extensive. The material on labor legislation is thin and widely scattered under a topical arrangement. Consequently, the student is not given a clear notion of the contents of any one law or a systematic statement of experience under the Railway Labor Act (statements, p. 312, rest too heavily on wartime experience), the Wagner Act, the Fair Labor Standards Act, or the Taft-Hartley Act, which is sometimes (see p. 286) referred to in the past tense.

From experience, the reviewer knows that no text can fully satisfy the needs and notions of numerous users. Some would have been pleased had the author devoted more space to experience with collective bargaining in individual industries—coal, railroads, clothing, steel, autos, building, trucking, etc. In that way, the student is made aware of ways in which characteristics of an industry and other factors influence union policies, limit the effectiveness of collective bargaining, and lead to variety and exceptions to generalizations. Some chapters give the impression of selection of material to prove a point, to which, however, students can find exceptions not mentioned or explained.

This text has many distinct advantages. The discussion of job desires, hiring practices, and labor mobility, growing out of the author's New Haven study, is excellent. Chapter XVI on non-union wage determination clearly demonstrates the chimerical character of "the competitive wage" and the practical impossibility of any policy to enforce a "competitive labor market." It should be read by his colleague, Professor Charles E. Lindblom, for it contains the basic criticism of *Unions and Capitalism*. A number of other subjects, such as job evaluation, incentive wage systems, and the non-economic values of unionism are well handled in brief space.

Student readers noted the absence of a systematic treatment of the issue of labor monopoly or the international aspects of labor standards. They also considered too optimistic statements that "the uneasy truce which exists during the first few years of collective bargaining is gradually converted into a relation of mutual confidence and cooperation" (p. 194; see also pp. 168 and 187), that industry-wide bargaining will eventually develop in most industries with a national market (p. 179), and that a large proportion of skilled workers "seem willing to support a policy of bringing the lower-paid workers up more rapidly than the higher-paid" (p. 389). The statement that the only

alternative to private wage bargaining is compulsory arbitration plus control of retail prices (p. 453) overlooks intermediate possibilities and the fact that Australia and New Zealand have had compulsory arbitration without price control.

Some of Professor Reynolds' remarks with respect to wages can be questioned. It is doubtful that, under non-union conditions, managements usually have granted wage increases first to individual workers and groups and later to the remainder of the plant's work force (pp. 226-27). Data fail to support the conclusion that occupational wage differentials have generally increased in percentage terms during business slumps (p. 336). The discussion of company wage policy in terms of a maximum and minimum level (pp. 183, 353-56, and 384) seems unreal (some oil-company executives deny that such an upper limit exists), neglects differences between companies, and assumes that wages are the chief variable. Here, and in a few other places (e.g., on p. 418) wage rates and labor cost are assumed to be synonymous, although the difference is clearly explained in Chapter XVI. The statement that the economic consequences of an increase in minimum wages, differentiated firm by firm and affecting only a small minority, are the same as a general wage increase (p. 456) misses the marked differences between the two situations, particularly with respect to prices and stimulus to improved management. The contention that, under "full" employment, a 10-per-cent increase in wage rates will lead to a 10-per-cent increase in all prices (pp. 422-24, 430) overlooks contractual and regulated or customary prices, productivity changes, and other factors explained by John Mitchell in *Organized Labor* (1903), pp. 111-12. The statement that the North-South differential arises from a larger labor supply in the south "relative to the number of job opportunities available" (p. 332) is a common assertion with little specific content; that the northward migration "has tended over the past several decades to narrow" the differential (p. 419) would be difficult to prove.

A few contradictory statements and errors should be corrected. On page 391 the union in men's clothing is said to set piece rates, with management having the right to protest, while on page 415 management is said to set the piece rates. Work hours are stated to be of little concern to workers on page 45 and the reverse on page 229. The composition of the executive board of the CIO is misstated (p. 142); remarks about the ineffectiveness and unconstitutionality of hours legislation (p. 228) overlook the Adamson Act; the National Labor Relations Board's decisions on representation cases cannot be appealed directly to the courts (p. 281); hourly earnings in the high-paying exceeded those in the low-paying plants by 50, not 35, per cent (p. 351); and the statements with respect to cash sickness in Rhode Island and California (pp. 523-24) overlook the fact of employee contributions. Chart 14 on page 435 is mislettered so that the three pages of the text discussing it do not make sense, and Chart 1 on page 67 has about a million too many union members around 1903.

In spite of the above objections to its organization, the treatment or neglect of certain subjects, and a tendency to overlook exceptions or other alternatives,

Professor Reynolds has produced a first-class textbook. Only those who have tried know how difficult and arduous such an achievement is.

RICHARD A. LESTER

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Trade Unions in the New Society. By HAROLD J. LASKI. (New York: Viking, 1949. Pp. 182. \$3.00.)

Only through the formation of an independent national labor party can American unions adequately protect their interests. That is the basic thesis expounded by Laski in this book—an expansion of a series of lectures he delivered in this country under the auspices of the Sidney Hillman Foundation. The thesis is defended in terms of the Marxian socio-economic framework. Thus, to take one example only, the concept of the state as the protector of propertied interests, which is crucial to Laski's conclusion, is an unadulterated application of the Marxian analysis.

Laski also touches on a series of propositions related in some degree to his central thesis, which display deep insight and offer constructive suggestions. But more of that at a later point. Here it is pertinent to explore another question: Is it logical (in a pragmatic, not formal, sense) to analyze the potentialities of a national labor party before first ascertaining whether such a party is at all feasible? If it is not feasible to form a national labor party as a going concern at this juncture of American historical development, it seems pointless to talk about such a party representing the best protection for organized labor. Nor is it any argument to aver that the discussion of desirability might lead to the conclusion there is so much to be gained from a national labor party that it would fire the workers with the necessary zeal to form such a party. For such an argument loses sight of the fact that will alone is not enough; the socio-economic environment must also be conducive.

The first relevant question in this whole issue therefore becomes: What are the necessary and sufficient conditions for the emergence and continuation of an independent national labor party in this country? But Laski hardly touches upon this question. To be sure, if one is willing to read between the lines and fill in the gaps, one can emerge with an answer couched in Marxian categories to indicate how the "proletariat" is bound to triumph by resolving the contradictions of capitalism *via* political action. But if one is willing to stretch the imagination to read that into Laski's analysis, one must be willing to face the obvious criticism: The strict and accurate application of the Marxian model to social change for purposes of prediction has too often proved mercilessly wrong, notably in terms of time sequence. Witness Engels' predictions about the working classes in England, and the advent of "socialism" in Russia which simply could not happen—but did.

A thorough and penetrating analysis of the American labor scene might well disclose that while the "Wisconsin School" has not been totally correct in its diagnosis of the political trends in American unionism, it has been far closer to the actual pattern of development than the "Marxist School." Thus, while some of the obstacles to the formation and success of a national labor party indicated by Commons and Perlman have diminished in intensity, the

essence of this socio-economic roadblock is still with us. Even Laski recognizes that when he writes:

The United States covers such a large area that the building of a new party could not help being a far more difficult task than it has been in European countries. Sectional interests are an obstacle to unified action. Religious differences have a thicker political nature than they have in mainly Protestant democracies like Great Britain or the Scandinavian countries or New Zealand. Inherited national differences go deeper the more heterogeneous the origins of the population. . . . A decision to form a party, moreover, might not only alienate the best elements among the farmers; it might also lead to a rush into its ranks of middle-class elements, especially the unstable "intellectuals" who might jeopardize the basically working-class leadership of the new organization (pp. 97, 138).

In the light of all this, an obvious question is posed: Exactly under what circumstances can such obstacles be overcome? And if they can be overcome, what is the likelihood of such circumstances arising? The author does not even begin to come to grips with these questions.

I am not asserting that Laski's *implications* about the "inevitability" of a national labor party are necessarily wrong. Actually, he may be dead right, but he does not demonstrate it. And precisely because an adequate analysis of the problem is lacking, we are in no position to know just how and when this "inevitability" will become an actuality. Further, if a national labor party is "inevitable," why should so many people spend so many man-hours of valuable energy in trying to persuade the labor movement that the formation of a labor party is to its best interests—as Laski does in these lectures, and as he did in *The American Democracy*. On the other hand, if a national labor party is not "inevitable" (feasible?) in the foreseeable future, of what practical value is any debate about the potential accomplishments of such a party?

As is customary with Laski in all his writings, he introduces a number of rather incisive comments in the course of developing his thesis, though they be not directly related to it. Two of these are worthy of note here.

First, his ideas on Communists in trade unions are particularly relevant in view of recent happenings within the CIO. Laski underlines the point that the purging of Communists in the labor movement is probably detrimental to organized labor, not only because it involves an attack against the most vigorous and ablest unionists in the movement—the *elan vital* of the movement, as it were—but also because it plays into the hands of management who will not fail to capitalize on this washing of dirty linen in public. The best way to handle the problem, according to Laski, is to insure adequate internal democracy in unions and then allow the rank and file to judge the issue on their own, rather than being "railroaded" into an anti-Communist position by the union leadership. Which brings us to the second point made by Laski: There is an urgent need for far more democracy in American trade unions than now obtains. He recognizes that a conflict may sometimes develop between "too much democracy" and the structural requirements for internal discipline, but implies that there is some optimum combination of the two

which would afford the members more participation than they now experience.

Although neither of the preceding points is fully developed by Laski, both touch on issues which are of vital concern to the labor movement and the nation at present. Laski's comments should shake the intellectual complacency of those observers who can see nothing wrong with current trends in the internal structure and operation of the American labor movement.

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Labor and Management in a Common Enterprise. By DOROTHEA DE SCHWEINITZ. (Cambridge: Harvard University Press. 1949. Pp. xiii, 186. \$3.00.)

In this volume Miss de Schweinitz has made a real contribution to the growing literature on the subject of union-management cooperation, a field which has been left too much to the exhorters and reformers who speak in generalities without an appreciation of the nature of the problem they are attacking. From her first-hand experience with the War Production Drive Division of WPB, she is able to present a factual statement of the nature of the joint production committees which were organized as part of the war program, the record of their achievements and failures, and the lessons to be learned from their conduct.

Among the excellent features of this book is its attention to details of operation—the kinds of committee organization, their procedures, the selection of personnel—which are necessary if one is to understand the significance and complexities of the problems which cooperation brings as well as seeks to solve. In particular, she evidences a well-placed concern for the relationship of the joint committee's activities to the managerial and union functions, and to collective bargaining. With respect to the latter she concludes that although the production problems of a labor-management committee should be divorced from the collective bargain, the two processes require better integration than has generally been achieved so far. "The war experience showed that confusion resulted if dual representation of workers existed through the labor-management committee and through the union, or if the union tolerated but did not participate in the cooperative effort."

In fact, Miss de Schweinitz suggests that cooperation has usually been oversimplified, and that its effective functioning requires a kind of planning which management has generally reserved for its more technical operations. It requires participation through all levels and departments of organization. ". . . In a well-integrated organization there is no such thing as one labor-management committee but a series of committees properly related, a mechanism for all union-management dealings dependent for its effectiveness on the attitudes and personalities on both sides of the bargain. The mechanism sounds elaborate but when measured against the time spent in a variety of unrelated meetings and informal discussions and against lags in production due to misunderstandings and to the concentration of responsibilities in the hands of a few overworked negotiators, this formal recognition of the scope of joint dealings might save expense, time, and friction."

The mushroom growth of joint committees under the impact of war (approx-

imately 5000) appears to offer little basis for assuming a groundswell movement. Miss de Schweinitz finds evidence of only 300 remaining, with varying degrees of effectiveness. Their ephemeral nature is further evidenced by the most frequent reason given for their discontinuance: "end of war." Many were frankly set up as "win-the-war" committees. The author suggests, however, the conditions under which cooperation is likely to spread: serious emergencies; rigorous competition in the product markets; a need for maintaining exceptionally high quality standards; a burden of out-of-line costs. These, for the most part, are the adverse circumstances under which it has usually been said that cooperation has most chance of success. To these Miss de Schweinitz adds that the growth of the union movement itself and a genuine acceptance of its permanence on the industrial scene may likewise be a stimulus to cooperation, and that the growth of research facilities in the hands of both unions and managements may encourage their joint attack on problems previously considered as something to "muddle through."

"But in most cases," she predicts, "union-management cooperation . . . will develop when a specific problem is to be solved. . . . Such issues lead to the formation of a joint committee which may disband when it considers its task accomplished or may broaden into a more extensive organization for plant-wide development." Success in the limited application is thus the likeliest stimulator of its larger use.

Other contributions of this study may simply be listed: the conditions for effective cooperation; discussion of the need for but limited use of measures of results; a statement of the specific lessons of our wartime experience; examples of cooperation in varied aspects of business operation; an examination of the basic problems which remain to be solved even when cooperation is working at its best.

This is a book to be recommended to all serious students of industrial relations.

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Left, Right and Center—Conflicting Forces in American Labor. By SIDNEY LENS. (Hinsdale, Ill.: Henry Regnery Co. 1949. Pp. 445. \$4.00.)

There are trenchant observations on American labor in Sidney Lens' book *Left, Right and Center*. But after one has said this he must quickly add that Sidney Lens' book fails to cut through the principal problems in American labor, or do much more than record conflicting forces. To this reviewer, the book reminds one of the methods of certain contemporary historians who chronicle the contemporary decade by reproducing headlines of *The New York Times*. Mr. Lens appears to be a young labor leader who takes ideas seriously, and reads widely, in addition to carrying on the strenuous duties of his local union office in Chicago.

In a book as profuse as this it is difficult to extract its main thesis. It appears to be: "Business unionism is not enough for American labor. When business unionism is replaced as a policy, labor will form an independent labor party, with socialistic orientation."

"The fundamental weakness of business unions must be sought outside the realm of either its excesses, on the one hand, or the sincerity of its main body, on the other hand," declares Mr. Lens. "The real trouble with unionism, inherited from Sam Gompers, is that it is way out of tune with the times; it anticipated but few of the social changes of the past sixty years, and now it is not capable of coping with the exigencies of socialized economy, great capitalistic monopolies, government inflation, and depressions."

It is part of Mr. Lens' intellectual method to deal with broad concepts like business unionism, socialism and capitalism. He has not learned yet that broad concepts are poor tools of communication, because they are likely to mean vastly different things to different persons and groups of persons. Mr. Lens is not careful to say what he himself means by "business unionism." Many labor leaders today agree with Mr. Lens that business unionism (in the reviewer's sense, or Mr. Lens' sense) is not enough, but the irony is that business unionism never erased social unionism during the last sixty years of labor's organized life, and social unionism has been permitted to grow, either in parallel or super-imposed upon the business union structure. Union officials may have been absorbed in the business of the union. The business agent is a union official paid to do that very thing. The fault of the union is that it does not place other important functions of the union on the same efficient basis. Too many labor leaders think their function has been discharged when there is a surplus in the treasury, but business unionism in the last sixty years has nevertheless permitted the growth of research and educational departments, engineering departments, international affairs departments, recreational departments, health and medical departments, insurance departments, banking departments—yes, even political departments (matters which Mr. Lens does not discuss).

Business unionism is the housekeeping side of unionism. It is just as necessary to keep a good house as it is to be a good citizen. Both tasks should be well performed.

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Population; Social Welfare; Living Standards

The Consumer and the Economic Order. By WARREN C. WAITE and RALPH CASSADY, JR. (New York: McGraw-Hill. 1949. Pp. x, 440. \$4.50.)

The Consumer Interest. By PERSIA CAMPBELL. (New York: Harper. 1949. Pp. ix, 660. \$4.50.)

These books are from authors already well known from their earlier writings in the field of consumption. Both appear to be designed as texts for college courses and are reviewed with such use in mind. The book by Waite and Cassady is a revision of one published ten years ago bearing the same title. Recent source materials have been used and some change in emphasis has been made. For example, legislation to control retail prices has been given a separate chapter. The book by Campbell is new, although a portion of it is a

direct descendant of her earlier book entitled *Consumer Representation in the New Deal*.

These books have many common characteristics. Their general themes, as stated in introductory remarks, are much the same. Waite and Cassady, for example, state: "The particular task of an economic order is to secure the best possible adjustment between the wants of a society and the means of supplying these wants"; and Campbell states: "We want to know how effectively our resources are used, both individual resources and the resources of the group as a whole, to satisfy our material wants" (p. 1). Both books are concerned primarily with the political rather than the household economy, although Campbell somewhat more than Waite and Cassady keeps before the readers the place of the household in the total economy.

Both books seem to have been designed for undergraduates and make much use of empirical data. The topics covered in each have much in common. Neither book reviews nor stresses theories of consumption explicitly. All but three of the twenty-two chapters in the book by Waite and Cassady relate to major topics included by Campbell. In spite of such similarities the books are, however, quite different in organization, emphasis on and elaboration of topics, and emotional tone.

The difference in scope and treatment of topics relates to illustrations used as well as topics covered. For example, Waite and Cassady use as illustrations chiefly products sold in retail stores; whereas Campbell in addition uses services. She has, in fact, separate chapters devoted to medical care and housing. Waite and Cassady devote a couple of pages to comments on the 1940 census housing data and omit medical care apart from its share in total family expenditures. Campbell gives 30 pages to international affairs and includes the cost of war, international trade and the objectives and programs of the various agencies of the United Nations. In contrast, Waite and Cassady give three pages to international trade. Waite and Cassady have a chapter on population in which are discussed population growth in relation to standards of living and "optimum" population. Campbell's book does not include these topics. "Government in the Economy" is given a somewhat broader treatment by Campbell than by Waite and Cassady. She includes the promotion of research and the entrepreneurial rôle of the government as well as its fiscal and regulatory activities which are common to both books. Campbell has a chapter entitled "The Consumer Movement" in which she considers the development of consumer education in the schools and colleges, consumer representation in federal agencies and the development and activities in various types of consumer organizations. Waite and Cassady make no reference to a consumer movement or consumer organizations in general as such although they have a chapter on "Consumers' Cooperation." Consumer education, as an index topic, is limited to a section entitled "Advertising as an Informational and Educative Device," and consumer rating agencies are considered.

Waite and Cassady give more attention than Campbell to the use of consumption data as indicators of market demand for various products and give

considerable space to elasticity of demand in relation to price and income. The discussion by Campbell of "price and income elasticity" together are confined to about one page, although a great deal of data on the relation of expenditures for various consumption categories to family income are presented.

Neither book gives much space to consideration of the current interest in consumption data as a basis of predicting total demand under given income, employment or other conditions, although Campbell has a page devoted to "deficit financing" (p. 586) and Waite and Cassady have four pages on "government responsibility for purchasing power" (pp. 410-14).

In Campbell's book the phrase "consumer interest" occurs again and again so that it comes to serve somewhat as a slogan. Such value for some people may be sufficient to offset its limited usefulness as an analytical concept. Campbell appears to make consumer interest identical with economic welfare as conceived in such books as *The Economics of Welfare* by Pigou. Established usage of words in the economic literature as well as popular connotation makes it seem probable that economic welfare is the better term. It has the special merit of having no personal connotation. To argue that my consumer interest can only be achieved by maximizing consumer satisfaction in a society as a whole, for example, is to tell me that I should be unselfish, socially minded, altruistic. The author's assumption about the orientation required of consumers, their need for losing their identity as separate consumer units, is exemplified by the following: "We are all consumers, and all have an interest in increasing the enjoyment derived from the consumption of material goods and services, both for our own families and for the community as a whole . . . To 'improve' the 'standard of living' we must find a more effective way of utilizing . . . resources for optimum output, and of dividing this output for maximum enjoyment" (p. 10).

One need not search far to assemble numerous examples of the unwillingness of groups to view thus their share in income distribution. Campbell does in fact state that "There seems to be a feeling in some trade union groups that a well-organized consumer movement would be antagonistic to 'labor,' and particularly to any demands for an increase in wages as adding to costs" (pp. 638-39). She objects, however, to narrowing the concept of consumer interest to that of people who, income in hand, turn to the market concerned with what and how much their dollars will purchase. Slichter is quoted as saying: "Hence in bargaining for lower costs management are representing consumers" (p. 639). Campbell argues that "This represents a basic misconception of the 'consumer interest,' which not only embraces workers as consumers, but also the degree of satisfaction derived from 'living conditions' on the job."

At various points Campbell seems, however, to slip into the narrower meaning. On page 616 we are told, "We are all consumers but most of us do not think of ourselves as such." Since this statement could hardly apply to people's interest in their income and their recognition of its importance as a means of securing food, housing, and other consumer goods, one might conclude that Campbell here has in mind their failure to think of the influence their dollars have in determining the allocation of resources, of the multitude of situations

that determine what their dollars will buy, and of the difficulties which they encounter in market selection. Furthermore, in locating the "early consumer movement" in the years between the end of World War I and the great Depression (p. 79), Campbell especially points to the setting up of the Division of Simplified Practice in the U. S. Department of Commerce and the publication of *The Tragedy of Waste* by Chase and Schlinck. These are surely very narrow aspects of economic welfare when one contrasts them with earlier efforts to reduce poverty and improve working conditions.

Although Campbell emphasizes the importance of income distribution in attaining a higher level of welfare, the data presented on income distribution are very scattered, and little attention is given to principles useful in resolving claims of competing groups. At least one rule as to income distribution is laid down. For example, on page 16 is the statement: "A 'living wage' is the sum which will provide . . . minimum subsistence. It is a sum below which no employer should be permitted to hire labor, since nothing less will provide the essentials of 'decent' living for a human being." The implications of this rule are not examined.

Such issues as are raised by Campbell can scarcely be examined without at least a skeleton of the theoretical framework of interrelations such as is presented in many treatments of welfare economics. Certain types of marginal analysis should be quite useful and the difficulty need not be too great for senior students.

Both books point out that welfare depends on consumer preferences as well as on income distribution and the efficiency in use of resources in terms of given ends. Campbell, more than Waite and Cassady, dwells, however, on the "quality" of consumption. An introductory statement might lead one to suppose that satisfactions were to be a major theme of the book: "The basic purpose of this study [is] to focus attention on the importance of evaluating the economy in terms of what people finally get out of it in goods and services, and the satisfaction derived from their consumption" (p. 6). The treatment of satisfactions is, however, very limited and to some students it may be very frustrating. Campbell distinguishes what she calls "The Satisfactional Standard" (p. 21) as something having to do not with goods and services as such but with satisfactions. She recognizes that "we have no present objective measures of it, and no techniques for arriving at them." (The implication seems to be that there are objective measures of a "poverty norm" and "minimum subsistence"—standards which have just previously been discussed.) Throughout the book numerous questions and comments occur. In the Conclusion we are told that "we must first examine the 'quality of our wanting'" (p. 646). Yet the psychology of consumer choice receives little systematic attention and nowhere is the student made aware of the academic disciplines that would help him to be intelligent in sharing in a consumer education program designed to improve the "quality" of consumer choices.

Waite and Cassady concentrate attention on specific problems and techniques. In Campbell's book, on the other hand, important topics such as monopoly, consumer protection, normative standards and the description of surveys and family consumption are scattered through several chapters. Major

topics such as measurement of cost of living occur as digressions in the midst of an attempt to lead the reader through abstract concepts as to standards of living. In addition, a historical review (145 pages in Section I) has little analytical value in spite of the fact that it includes the experience of the war years as to central planning and control. The organization of events and the descriptive detail are very uneven, one moves from the dramatic to the undramatic in a disconcerting fashion. On page 81, for example, the reader passes from the collapse of the "foundations of decent living," the coming of the farm problem and the birth of the American Farm Bureau and the Bureau of Agricultural Economics to details as to the average number of person per farm family, and then on to consider the difficulty of placing a value on food and fuel from the farm.

The common characteristics of these two textbooks are, in brief, their usefulness in giving students considerable acquaintance with "consumer" literature and source materials at the elementary level. But if the emphasis of a course is to be skills and techniques on which students of consumer and consumption economics are often assumed to be familiar, such as income elasticity, cost-of-living indexes, appraisal of extent of monopoly, the book by Waite and Cassady will probably be found more useful. On the other hand, if it seems especially important to have a textbook especially designed to inculcate in the students the habit of questioning various policies in terms of human welfare, the one by Campbell will be preferred. In contrast with an objective rather pedantic treatment of consumption and consumer problems as presented by Waite and Cassady, Campbell has a lively interest in the social conscience.

Neither of the books suggest bibliographic materials to supplement the text, although both have considerable documentation as to source materials drawn upon.

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NOTES

The following have been appointed members of the American Economic Association nominating committee for the current year: Calvin B. Hoover, Duke University, Chairman, Jacob Viner, Princeton University, Elizabeth E. Hoyt, Iowa State College, Carter Goodrich, Columbia University, Howard R. Bowen, University of Illinois, and Alfred C. Neal, Federal Reserve Bank of Boston. The chairman of this committee would appreciate receiving any suggestions for officers for next year as soon as possible.

FELLOWSHIPS FOR GRADUATE STUDY IN LATIN AMERICA UNDER THE CONVENTION FOR THE PROMOTION OF INTER-AMERICAN CULTURAL RELATIONS

The United States Office of Education, in cooperation with the Department of State, announces the availability of fellowships to United States graduate students, as provided under the Convention for the Promotion of Inter-American Cultural Relations, for study in Latin American countries.

Students desirous of making application should write to the Division of International Educational Relations, American Republics Section, U. S. Office of Education, Washington 25, D.C.

Deaths

Oliver E. Baker, December 2, 1949.

Joseph A. Schumpeter, January 8, 1950.

Janet R. Sundelson, December 28, 1949.

Russell Weisman, November 8, 1949.

Appointments and Resignations

E. Sherman Adams, formerly assistant vice president, Central Hanover Bank, New York City, has been appointed lecturer in the department of economics, School of Commerce, New York University.

Paul H. Anderson is now chief of the Traffic Statistics Section of the Transportation Corps of the U. S. Army in Washington, D.C.

Howard L. Balsley has been appointed assistant professor of economics in the College of Business, University of Utah.

B. H. Beckhart, formerly director of research at the Chase National Bank, has resumed teaching at the Graduate School of Business, Columbia University. He is continuing as economic consultant to the Chase National Bank.

Earl R. Beckner is chief of the Manpower Division and economic adviser in the Office of Labor Affairs, U. S. High Commission for Germany.

Richard F. Behrendt, of Colgate University, was in Peru from August to November, 1949, acting as senior economic specialist of an Economic and Financial Mission to the Peruvian government.

James H. Blackman has been appointed research associate in the Russian Economic Project and lecturer in the department of political economy at the Johns Hopkins University.

Henry S. Bloch has been appointed acting director of the Fiscal Division of the Department of Economic Affairs, United Nations, Lake Success.

Robert W. Bradbury has been appointed associate professor of economics at the University of Florida.

Samuel E. Braden, of Indiana University, is pursuing research study in London on a Fulbright fellowship.

H. N. Broom, formerly of the University of Texas, is professor of business statistics and chairman of the department of general business at Baylor University.

A. J. Brown, dean of economics and commerce at the University of Leeds, is visiting professor of economics at Columbia University in the spring session.

Weir M. Brown is serving, on loan from the Office of International Finance of the Treasury, as finance officer of the E.C.A. Mission to the Netherlands.

Edwin L. Caldwell is assistant professor of economics at Baylor University.

John R. Coleman has joined the staff of the Massachusetts Institute of Technology as instructor in economics and social science.

Sidney Davidson has been appointed assistant professor of accounting in the School of Business of the Johns Hopkins University.

Lawrence S. Dreiman, formerly chief, Internal Finance Section, Office of the Special Representative, Economic Cooperation Administration, Paris, France, is now chief of the E.C.A. Local Currency Branch in Washington.

Warren W. Eason has joined the staff of the Russian Manpower Research program of the Johns Hopkins University.

Martin Gainsbrugh, director of research, National Industrial Conference Board, has been appointed adjunct associate professor in the department of economics, School of Commerce, New York University.

J. Kenneth Galbraith has been appointed professor of economics at Harvard University.

Faye M. Goldware has been appointed research associate in the Russian Economic Project at the Johns Hopkins University.

Everett E. Hagen has been named chairman of the department of economics, University of Illinois.

Homer H. Hamner, of the University of Southern California, is now chairman of the department of economics at Baylor University.

Howard J. Hilton, Jr., is now serving as foreign affairs specialist in the Office of European Regional Affairs, Department of State.

Francis E. Hummel has been appointed instructor in the School of Business Administration of the University of Massachusetts.

Arthur D. Jacobsen has resigned as chairman of the School of Business and Economics of Eastern New Mexico University to accept an appointment as head of Business Administration, Palos Verdes College, Rolling Hills, California.

James M. Jarrett has recently been appointed a member of the Excess Profits Tax Council of the U. S. Treasury Department.

V. D. Jolley, formerly of the University of Cincinnati, is professor of business administration at Marshall College.

Mark L. Kahn is instructor in economics at Wayne University.

Saul Kasdan has been appointed research associate in the Russian Economic Project at the Johns Hopkins University.

Walter E. Krause, of Dartmouth College, has been appointed professor of economics in the College of Business, University of Utah, effective in July.

Alfred Kuhn, formerly of the industrial relations department of the University of Pennsylvania, has been appointed assistant professor of economics at the University of Cincinnati.

Louis Kuipers, of the University of Chicago, has accepted a position as financial analyst with the Ford Motor Company.

Bernhard C. Lemke has resigned from Iowa State College to accept a professorship in the department of business administration of Michigan State College.

Norman H. Leonard, Jr., has been promoted to an associate professorship in the department of economics and business administration of Ohio Wesleyan University.

Daniel C. Lewis is now assistant professor of commerce at Washington and Lee University.

Bertram H. Lindman has been retained by the Association of American Railroads as a consultant in its study of the effect of competitive highway transportation on the railroads.

Patrick M. Malin has resigned as professor of economics at Swarthmore College to become director of the American Civil Liberties Union.

Charles F. Marsh is on leave from the College of William and Mary to serve as coordinator-consultant, Advisory Council on the Virginia Economy, an agency of the state government.

Martha Mathiasen has been appointed instructor in the School of Business Administration, University of Massachusetts.

Davy H. McCall is now instructor in economics at Western Reserve University.

John W. McCalley, of George Washington University, has joined the staff of the Brookings Institution.

Francis P. Murphy has been appointed instructor in economics at the University of Massachusetts.

Daniel A. Nimer has been appointed instructor in economics and sociology at Kansas State College.

Robert T. Patterson has been appointed part-time instructor in economics, School of Commerce, New York University.

John S. Quinn has been appointed instructor in business administration at the College of William and Mary.

Meyer Rashis has been appointed assistant professor of economics at Bowdoin College.

Carl Raushenbush is assistant director of the Division of Research and Statistics of the New York State Department of Labor.

Jewel J. Rasmussen has been on leave of absence from the University of Utah to serve with the Fiscal Analysis Division of the Bureau of the Budget.

Eleanor J. Robinson has been appointed associate professor of economics at Baylor University.

Stefan H. Robock has resigned from the Antitrust Division, Department of Justice, to become assistant chief of the Industrial Economics Branch of the Tennessee Valley Authority in Knoxville.

Nicholas W. Rodin has been appointed research associate in the Russian Economic Project and lecturer in the department of political economy at the Johns Hopkins University.

John A. Sawyer is sessional lecturer in the department of political economy at the University of Alberta.

Sidney Schoeffler has been appointed instructor in the School of Business Administration of the University of Massachusetts.

Ralson D. Scott is acting assistant professor of economics and business administration at the College of Williams and Mary.

Richard T. Selden has been appointed instructor in the School of Business Administration, University of Massachusetts.

Harry Shaffer has resigned from Concord College to accept an appointment as instructor in economics at the University of Alabama.

Allen M. Sievers has been appointed associate professor in the School of Business Administration of the University of Massachusetts.

Frank A. Singer has been appointed instructor in the School of Business Administration of the University of Massachusetts.

Harlan M. Smith has been promoted to the rank of assistant professor of economics at Brown University.

Robert E. Smith has been appointed assistant professor of economics in the College of Business, University of Utah.

Boris M. Stanfield, on leave from Columbia College in the spring session, is visiting professor of economics at the University of Hawaii.

Walter F. Stettner, previously economist with the Board of Governors of the Federal Reserve System, has joined the Economic Cooperation Administration where he is assistant chief of the Intra-European Trade Branch.

James A Storer is instructor in economics at Bowdoin College.

John Stovel has been appointed assistant professor in the School of Business Administration of the University of Minnesota.

Robert H. Strotz, of Northwestern University, has a part-time appointment as visiting lecturer in the department of economics of the University of Wisconsin for the current semester.

Bruno K. Suviranta, of the University of Helsinki, was visiting professor of economics at the School of Business Administration, Emory University, in the winter quarter.

Charles A. Taff, of Kent State University, has been appointed assistant professor of transportation, University of Maryland, College Park, Maryland.

Kenneth L. Treftzs, on leave from the University of Southern California, is teaching at the University of Washington.

George B. Tully has been appointed instructor in economics in the College of Business, University of Utah.

Paul M. Van Arsdell has been appointed vice chairman of the department of economics, University of Illinois.

Francis Vetterling has been appointed instructor in economics at the University of Massachusetts.

Arthur G. Vieth, of Washington University, has been appointed assistant professor of economics and commerce at the University of Chattanooga.

Henry C. Wallich has been appointed visiting lecturer in the department of economics and social institutions at Princeton University for the spring term.

Maxine Y. Woolston has been appointed lecturer in political economy at Bryn Mawr College for the current year.

H. J. Wyngarden has been appointed dean of the School of Business and Public Service of Michigan State College.

VACANCIES AND APPLICATIONS

The Association is glad to render service to applicants who wish to make known their availability for positions in the field of economics and to administrative officers of colleges and universities and to others who are seeking to fill vacancies.

The officers of the Association take no responsibility for making a selection among the applicants or following up the results. The Secretary's Office will merely afford a central point for clearing inquiries; and the *Review* will publish in this section brief descriptions of vacancies announced and of applications made. It is optional with those submitting such announcements to publish name and address or to use a key number.

Communications should be addressed to: The Secretary, American Economic Association, Northwestern University, Evanston, Illinois.

Vacancies

(1) *Economic history; (2) labor economics, industrial relations and related subjects; (3) the history and ideology of labor movements in general and the Jewish labor movement in particular; (4) the history, ideology and problems of the co-operative movement with special reference to the significance of this movement in Israel:* The Hebrew University, Jerusalem, announces openings for senior posts (lecturer or professor) in these four fields. The latter three constitute the nucleus of an Institute of Labor and the Co-operative Movement. Instruction must eventually be carried out in Hebrew. Applications should be sent to the Academic Secretary, Hebrew University, Jerusalem, Israel, giving full details of age, training qualifications, former and present positions, publications, and general experience. The names and addresses of three references should also be given.

Accounting: Leading university in the Middle Atlantic States area requires man with C.P.A. and master's degree (or with Ph.D. without C.P.A.). P141

Economists Available for Positions

Comparative economic systems, social economics, international economic relations, psychological frontiers of economics: Man, 45, married, European Ph.D., American citizen. Numerous books and articles; extensive experience in teaching and research; has permanent position at well-known Eastern college; prefers position with facilities for graduate teaching and research. Available in summer or fall, 1950. E108

Labor economics, industrial relations, business administration, economic theory: Man, 35, married, children. Eleven years of successful teaching, research, and administrative experience in leading colleges and universities; business experience as junior executive; government consultant; publications; academic honors. Desires greater opportunity for professional advancement. Available for September, 1950. E194

Public finance, theory, transportation and/or public utilities: Man, 39, family, Ph.D., J.D. Seven years of university teaching experience; 4 years of federal and state research and administrative experience; 2 years of business experience; 3 years abroad. Extensive list of publications; now employed by state university; desires permanent change of location teaching and/or engaging in research at level of professor or associate professor. Will consider departmental head. Available in June, 1950. E234

Business, social and industrial psychology, human relations: Man, mature age, Ph.D. Outstanding references; employed; desires advancement. Available on short notice. E245

International economics, principles of economics, money and banking, national income, public finance, business law: Man, 40, Ph.D., University of Frankfurt (Main); U. S. citizen. Eight years of experience as economist with U. S. government agencies and with leading private economic research organization; now teaching at Eastern college. E255

Wide range of subjects: Man, Ph.D., professional standing, experienced and stimulating teacher commanding a wide range of subjects. E259

Accounting, auditing, corporation finance, foreign trade, industrial organization, German: Man, 45, LL.D.; now assistant professor at Phillips University, Enid, Oklahoma; seeks post as visiting lecturer for summer session, 1950. E277

Statistics, economic and business research, money and banking, labor economics: Man, 45, married, Ph.D. Eighteen years of experience in teaching, research, and business; publications; academic honors. Now faculty member at Midwestern university. Desires professional advancement or administrative position. E298

Accounting, economics, money and banking, advanced cost, analysis of financial statements, history of economic thought: Man, 50, Ph.D., M.B.A., American citizen. Administrative experience in executive positions with largest world concerns; consular experience. At present connected with large Midwestern university. Seeks professorship or associate professorship. E300

Foreign trade, localization, economic policy: Man, 48, Austrian, at present visiting professor at a Western university (permanent permit for America). Original contributions to theory (price and foreign trade) and policy (interventionist technique); international teaching experience (Austria, Low Countries, professorial status at Oxford, head of departmentship at a leading Oriental university); 15 surveys, 8 publications and many periodical articles; high degrees. Allied government economic adviser and international expert; diplomatic and currency-banking experience; personality. Prefers post where postgraduate research direction is possible. E303

Business administration, business law, organization and finance, personnel management, insurance, real estate, the marketing group, economics: Man, married. Extensive teaching and administrative experience as department chairman and as head of school of business and economics of state university. E306

Economic principles, economic thought, economic history of Europe and United States, labor problems and history, comparative economic systems, public finance: Man, Ph.D. Eighteen years of successful experience; now employed. Desires position in state college or university; Southern or Western location preferred. E310

Production, consumption, capital, labor, value, price, formation and distribution of social income, history of economic thought, business administration, money, credit, business cycles: Man, 44, Ph.D. Writer of more than ten scientific research works and essays, with more than 15 years of university teaching experience. Wishes position in economics. E317

Economic principles, commerce and finance, accounting, stock market: Man, 36, married, B.S. (*Magna Cum Laude*) from New York University; M.A. in June, 1950, under a teaching assistantship in Eastern college; seeking instructorship in above subjects. Will accept part-time teaching position in conjunction with Ph.D. study. Available in June, 1950. E318

Vacation courses in British economic and social problems, currency and banking, economic history of Britain: British woman, Ph.D. (Cambridge), willing to help with American university vacation courses, summer, 1950. Experienced university lecturer. E319

Statistics, business cycles, marketing, consumer economics: Man, 40, B.S. in marketing, New York University; M.A. in economics, Columbia University; working toward Ph.D. Market analyst; writer and teacher before war; government economist in charge of training economic analysts, 1944-47; since then teaching advertising, business cycles and sales forecasting, principles of marketing, statistics; assistant professor in Western college desires position near northern New Jersey home. Objectives: (1) development and application of teaching methods that inspire learning; (2) writing readable textbooks. E320

Accounting, mathematics of accounting, law: Man, 43. Head of business administration department in senior, four-year college; practical experience as accountant, auditor, and conducting own accounting practice. Desirous of location in a Southern Christian institution. E321

Money, banking and business cycles, comparative economic systems, international economics, principles: Young man, married, British resident of the United States; B.S. (Economics), 1st Class Hons., University of London; graduate work, Princeton University. Teaching and research experience in leading Pacific Coast universities; now temporarily in economic post, U.N. specialized agency, Geneva; European and American references; widely traveled. Desires teaching and/or research post to finish Ph.D.; returning to the United States and available in June, 1950. E322

Management, labor relations, business economics: Man, Ph.D. Text on industrial management completed. Experience includes business and ten years of university teaching. Available as professor and department head. E323

Corporate control, economic theory, principles and problems, consumption, business cycles: Woman, age 26, M.A. Two years of college teaching experience; 2 years as economist with government agency; academic honors. Available on short notice. Desires teaching, research, or administrative position. E324

Economic theory, business cycles, history of economic thought, comparative economic systems, principles and problems, money and banking: Man, 45, Ph.D., American citizen. Extensive experience teaching at the undergraduate level and some at the graduate level; excellent references; now head of a four-man undergraduate department of economics in an Eastern college. Prefers a position where he can teach some graduate students and where he can get time to write. Available in the summer or fall, 1950. E325

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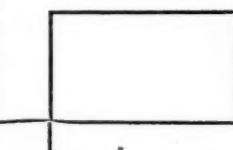
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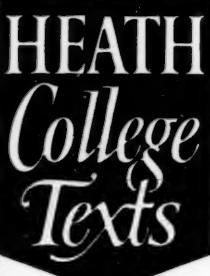
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